STRATEGIES TO FACILITATE THE INTEGRATION OF FAMILY PLANNING AND HIV SERVICES AT THE PUBLIC HEALTH CENTRE LEVEL IN ADDIS ABABA, ETHIOPIA

by

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Student number: 53484304

DECLARATION

I declare that **STRATEGIES TO FACILITATE THE INTEGRATION OF FAMILY PLANNING AND HIV SERVICES AT THE PUBLIC HEALTH CENTRE LEVEL IN ADDIS ABABA, ETHIOPIA** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.

20 January 2018

..... **.....**

SIGNATURE **DATE**

MEKONNEN DESSIE AYALEW

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ABSTRACT

Improving the implementation of family planning through integration with HIV services is vital to reduce maternal and child morbidity and mortality that has been a concern especially in developing countries like Ethiopia (UNFPA 2016). The aim of this study was to develop a strategic plan that could facilitate the implementation of an integrated family planning and HIV services at the public health centre level.

The researcher utilized an explanatory sequential mixed method design with quantitative data collected in the first phase and qualitative data collected in the second phase. Data were collected from 403 clients in face-to-face structured interviews and from 305 service providers by means of a self-administered questionnaire. Descriptive analysis was applied to describe the findings of the study. Significance testing between variables was computed by odds ratio, p-value and 95% confidence interval. Bivariate and multi-variate logistic regressions were used for the analysis.

In Phase 1, awareness of family planning methods, male involvement, marital status, client satisfaction, family income, waiting time, training, awareness of policies/guideline and transport availability were statistically significant challenges identified by clients and service providers. The client and service provider respondents identified previous use of family planning, men's involvement, client satisfaction, availability of behavioural change communication materials, accessibility, budget, infrastructure and medical resources as opportunities.

In phase 2, the researcher utilized the nominal group technique (NGT) to collect qualitative data from programme officers. Twenty-four programme officers from 10 sub city health offices, city and national level participated in two nominal groups, consisting of 12 participants each. Multiple group analysis was used to analyse the data from the

nominal groups. The five strategies ranked as the most important were leadership and management; capacity building; implementation of policies and guidelines; advocacy/awareness, and infrastructure.

The findings in phase 1 and phase 2 formed the basis for the development of a strategic plan using the process planning model. The strategic plan was developed and validated with the active participation and involvement of programme officers. The plan is intended to be implemented by service providers and programme officers to facilitate the implementation of integrated family planning and HIV services at the public health centre level.

Key terms: Clients, service providers, programme officers, family planning, HIV, integration, challenges, opportunities, strategies, public health centres.

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- Mrs Iauma Cooper, for professionally and critically editing the manuscript

Dedication

This work is dedicated to my wife (Tirsit Yeserah) and my daughters (Heran Dessie and Absalat Dessie) who were very supportive and compassionate throughout the writing of this work. Thank you very much for your encouragement and always being on my side.

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LIST OF ABBREVIATIONS

AACAHB	Addis Ababa City Administration Health Bureau
AIDS	Acquired Immuno Deficiency Syndrome
ANA	American Nursing Association
ART	Antiretroviral Therapy
BCC	Behavioural Change Communication
CDC	Centers for Disease Control and Prevention
CI	Confidence Interval
DMPA	Depot Medroxy Progestrone
EDHS	Ethiopian Demographic Health Survey
FHI	Family Health international
FP	Family Planning
GDP	Gross Domestic Product
HAPCO	HIV/AIDS Prevention and Control office
HIV	Human Immuno Deficiency Virus
HSDP	Health Sector Development plan
ICF	Inner City Fund
ICM	International Confederation of midwives
ICPD	International Conference on Population and Development Implementing the decision
IMA	Inter church Medical Assistance
IPPF	International Planned Parenthood Federation
IUDs	Intra Uterine Devices
LAFP	Long Acting Family Planning
LAM	Lactational Amenorrhea Method
MARPs	Most At Risk Populations
MDGs	Millennium Development Goals
MOH	Ministry of Health
MSM	Men sex with men
NET-EN	Norethisterone Enanthate
NGO	Non-Governmental Organization
NGT	Nominal Group Technique
OCP	Oral Contraceptive Pills
OR	Ratio
PEPFAR	President's Emergency Plan for AIDS Relief
PHO	Public Health Officers
PITC	Provider Initiated HIV Testing and Counselling
PMTCT	Prevention of Mother to Child transmission
REDI	Rapport building, Exploration, Decision making and Implementing
SAGE	Strategic Advisory Group Experts
SDGs	Sustainable Development Goals
SRS	Simple Random Sampling
STIs	Sexually Transmitted Infections
TVET	Technic and Vocational Education Training
UHC	Universal health Coverage
UN	United Nations
UNAIDS	United Nations Programme on HIV/AIDS
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children's Emergency Fund
UNISA	University of South Africa
USAID	United States Agency for International Development.
VCT	Voluntary HIV counselling and Testing
WHO	World Health Organization

CHAPTER ONE

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

Globally, an estimated 34 million people are living with HIV/AIDS and 8 million people are on antiretroviral therapy. In 2012, 23.5 million people in sub-Saharan countries were living with HIV/AIDS. Of these, 5.6 million lived in South Africa and 970,000 in Ethiopia (UNAIDS 2012:6-7). Many of these were women in the reproductive years, but did not necessarily want to be pregnant (UNAIDS 2012:29). Although the majority of women want to avoid or plan their pregnancies, in developing countries they do not always have access to modern contraceptives. This might contribute to the global number with unplanned pregnancies (Singh & Darroch 2012:10).

Many Ethiopian women living with HIV want to prevent or to space pregnancies (Habte & Namasasu 2015:41). Integrating family planning services with HIV services can therefore address family planning needs of people living with HIV (Johnson, Varallyay & Ametepi 2012:6-7).

Regarding integrating family planning and HIV services, Scholl and Cothran (2011:3) found that programmes in Kenya and Ethiopia were leading the way. Kenya started training voluntary HIV counselling and testing counsellors to provide family planning counselling and contraceptives at “one stop” (Scholl & Cothran 2011:3). In Ethiopia, there is not a separate national family planning and HIV service integration strategy or guideline. However, the integration of family planning and HIV services is addressed to some extent in national family planning service guidelines and HIV/AIDS strategies (MOH Ethiopia 2011:26-27).

1.2 BACKGROUND

In Ethiopia, there is a 1.5% HIV prevalence among women in the reproductive age (15-49 years). HIV testing service coverage is 86% for women and 82% for men despite the

fact that women have a higher HIV prevalence (1.9%) than men (1%) (Central Statistics Authority & ICF International 2011:231).

A study on HIV infection and contraceptive need among female Ethiopian voluntary HIV counselling and testing clients found that most of the women tested lived in Oromyia regional state, and 34% wanted to prevent or delay child bearing but did not have access to modern contraceptives (Bradley, Tsuia, Kidanub & Gillespie 2010:1302). Integrating family planning and HIV services in a "one-stop" approach could therefore be convenient for clients who want to use both services. It could minimize missed opportunities to address family planning needs of people living with HIV in a cost-effective way that would increase access to information and services (Johnson et al., 2012:7).

The integration of family planning and HIV services is effectively implemented in some countries in Africa as well as in Asia (Gay, Hardee, Croce-Galis & Hall 2011:1). Countries where integrated family planning and HIV services were successful include Kenya, Lesotho, Uganda, Vietnam, India and South Africa (Ringheim, Yeakey, Gribble et al., 2009:1-2). The development of appropriate and cost-effective strategies to integrate family planning and HIV services in Ethiopia may contribute to better health, planned pregnancies as well as HIV prevention and treatment.

1.3 PROBLEM STATEMENT

There are 156 public hospitals; 3,335 public health centres; 16,251 health posts, and 2,065 private hospitals and clinics in Ethiopia (MOH Ethiopia & UN 2014:72-73). Although most public hospitals and health centres provide an integrated family planning and HIV service, most of the time the integrated service provision is not fully implemented and not convenient for clients in Ethiopia (Addis Ababa City Administration Health Bureau 2014:1-3). The aim of integrating the two services at all HIV services facilities as well as the family planning services facilities in Ethiopia is to increase access for family planning, HIV testing and counselling services for all health care users at one facility (MOH Ethiopia 2011:21).

Addis Ababa, the capital of Ethiopia has 80 public health centres, 11 public hospitals and 732 private hospitals and clinics. In all public health centres, the family planning

and/or HIV services are available and given to clients. However, the integrated family planning and HIV service is not always given in a “one-stop’’ approach and is not fully implemented (Addis Ababa City Administration Health Bureau 20124:10). Not all clients get integrated family planning and HIV services because of weak referral and networking systems between health facilities and organisations in Addis Ababa (Thomas, Reynolds, Bevc &Tsegaye 2014:5-6). The integrated services are also poorly monitored and evaluated in Sub-Saharan Africa (Johnson et al., 2012:69-70).

Many factors contribute to the challenges experienced with family planning and HIV service integration at public health centre level, including the capacity of service providers, such as nurses and doctors; a lack of contraceptive pills and devices, which can cause an interruption in contraceptive use, and too few HIV test kits. Incomplete capturing of data within existing registers, minimal monitoring and evaluation, lack of infrastructure and poor referral systems (Johnson et al., 2012:9) and independent programme administration and funding (Bradley et al., 2008:69) also contribute to the challenges. To address these challenges and to facilitate the integration of family planning and HIV services at public health centre level in Addis Ababa, strategies and plans have to be developed to ensure better accessibility and utilization of a one-stop family planning and HIV service. Ultimately, maternal and child health should be improved in Addis Ababa.

1.4 THEORETICAL GROUNDING

The theory of change and logic model guides the development of health interventions, like family planning and HIV programmes. The W.K. Kellogg Foundation’s (2014) logic model formed the basis of this study (see figure 1.1). Figure 1.1 presents the framework, based on the logic model for the study.

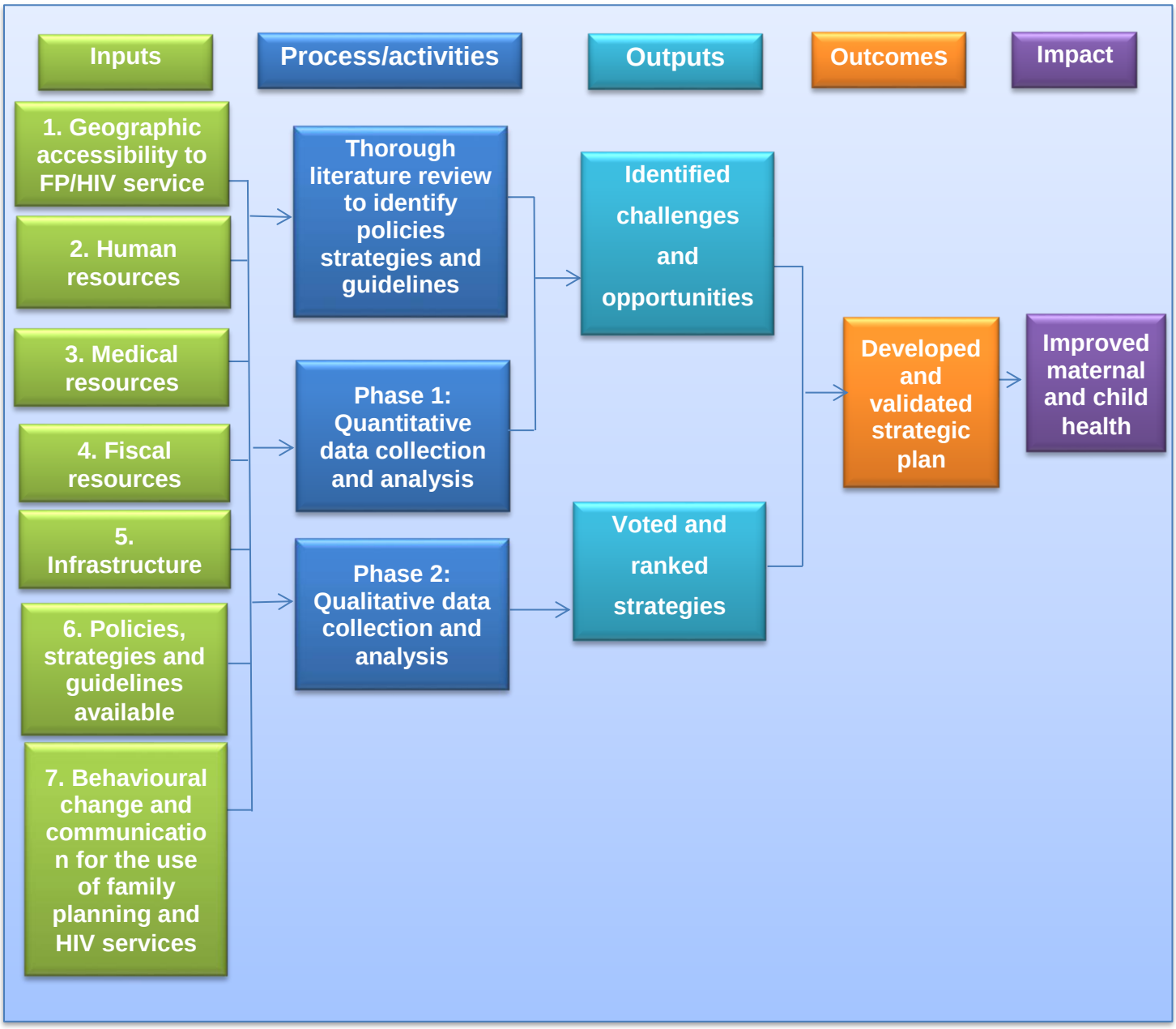

Figure 1.1 Change logic model

Adapted from W.K. Kellogg Foundation (2004:2)

In this study, the change logic model was applied and used as follows:

- **Inputs** refer to the financial, human and material resources used in a programme or policy (Rogers 2014:14). The inputs in this study were geographic accessibility to family planning/HIV services; human resources; medical resources (IUD/implant insertion/removal sets and voluntary surgical sets for vasectomy and tubal ligation); family planning methods or contraceptives, HIV test kits and

ART (Antiretroviral therapy); fiscal resources; infrastructure (building facilities with adequate rooms and space, roads and transportation); policies, strategies and guidelines; behavioural change and communication materials, like leaflets and booklets for the use of family planning and HIV services as well as the integrated health services.

- **Process** or activities refer to the processes, tools, events, technology, and actions that are an intentional part of programme implementation (W.K. Kellogg Foundation 2004:2). The activities in this study were the processes in place to support and produce desirable outputs. These activities included the identification of policies in place, strategies implemented and guidelines used; literature reviewed; the data obtained in phase 1 and quantitative and qualitative data collection, analysis and interpretation (see chapter 2 and 4 for discussion).

- **Output** refers to the immediate effects of programme/policy activities, or the direct products or deliverables of programme/policy activities (Rogers 2014:14). The outputs in this study referred to the identified challenges and opportunities of integrated family planning and HIV services at the public health centre level and the strategies identified by programme officers (see chapter 4 and 6).

- **Outcome** refers to the likely or achieved short-term and medium-term effects of a programme policy's/or strategies' outputs (Rogers 2014:14). In this study, the outcome was a developed and validated strategic plan that can facilitate the implementation of integrated family planning and HIV services at the public health centre level (see chapter 7 section 7.4).

- **Impact** refers to positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended (Rogers 2014:14). The impact in this study was the integration of family planning and HIV services at the public health centre level to improve mother and child health in the long term. *This could not be measured during the study as it will only be measurable in the long term.*

Although the study was based on the change logic model, Ortrun's (2002) process planning model as adapted by Lubbe, Roets and Van Tonder (2014:6397) was used to

develop the strategic plan (see figure 1.2 and chapter 7, section 7.2). The process planning model can be used for the development of a strategic plan that links the theoretical concept to the practical programme design and implementation. The strategic plan describes the relationship of concepts assumed to occur and what has to be done by whom, how, and when (Ortrun 2002:143).The model has three main components applied in this study: vision, context and practice (see chapter 7 for detailed discussion).

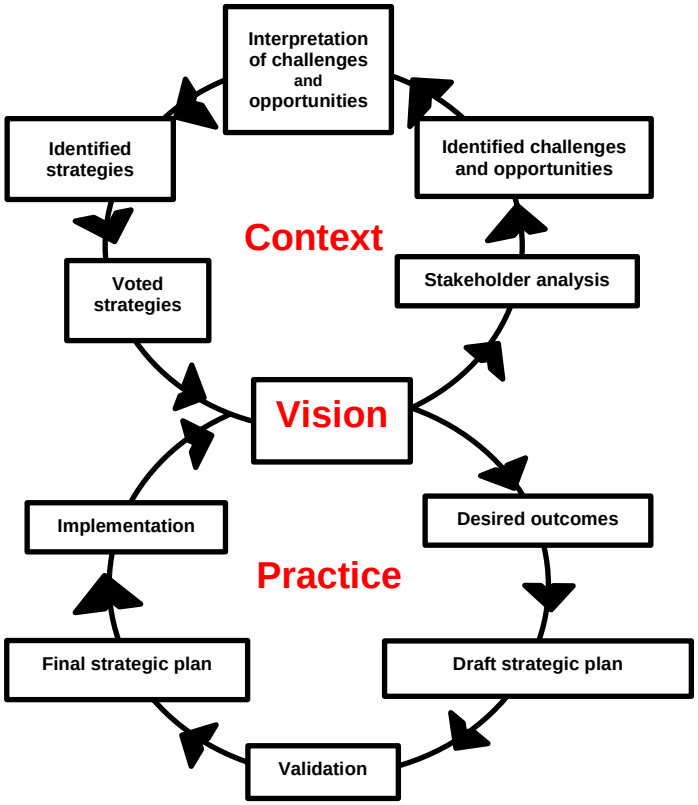

Figure 1.2 The process planning model

Adapted from Ortrun (2002:145); Lubbe, Roets & Van Tonder (2014:6397)

1.5 AIM AND OBJECTIVES

The aim of this study was to develop a strategic plan that could facilitate the implementation of an integrated family planning and HIV service at public health centre level in Addis Ababa, Ethiopia.

In order to achieve the aim, the objectives of the study were to:

- Describe the challenges of clients using integrated family planning and HIV services in public health centres in Addis Ababa, Ethiopia.
- Describe the opportunities of clients using integrated family planning and HIV services in public health centres in Addis Ababa, Ethiopia.
- Describe the challenges of service providers' regarding integrated family planning and HIV services in public health centres in Addis Ababa, Ethiopia.
- Describe the opportunities of service providers' regarding integrated family planning and HIV services in public health centres in Addis Ababa, Ethiopia.
- Identify strategies that could facilitate the implementation of an integrated family planning and HIV services at the public health centre level.
- Develop a strategic plan that could facilitate the implementation of an integrated family planning and HIV services at the public health centre level in Addis Ababa.

1.6 RESEARCH DESIGN AND METHODOLOGY

This section briefly describes the research design and methodology used in the study. Chapter 3 describes the research design and methodology in detail.

1.6.1 Research design

The researcher utilised a sequential mixed method research design in this study. The researcher used quantitative and qualitative research methods (Hesse-Biber 2010:3). Quantitative data were obtained from clients and service providers (phase 1) and provided the scientific evidence to share with stakeholders, namely programme officers. This data and the literature review formed the basis for identifying and voting on strategies qualitatively (see chapter 5 for discussion), by means of a nominal group discussion (phase 2), and the development of the strategic plan (see chapter 7, section 7.2.3 for discussion).

1.6.2 Explanatory sequential mixed method

The researcher utilised an explanatory sequential mixed method design with quantitative data collected in the first phase followed by qualitative data collected in the second phase. The quantitative data from the first phase was used to present to the participants to provide them with information to identify and prioritise strategies to facilitate the integration of family planning and HIV services to all public health centres in Addis Ababa.

1.6.3 Setting

The study was conducted in Addis Ababa, the capital city of Ethiopia. There are 80 public health centres and 732 private health clinics that serve a population of approximately 3 million who live in ten (10) administrative sub-cities (Addis Ababa City Administration Health Bureau 2014:10). The researcher conducted the study in two phases.

1.6.4 Phase 1: Quantitative

1.6.4.1 Population

In this phase, the population consisted of public health centres, patients/clients and service providers.

Public health centres: In the 80 public health centres, there were 690,000 clients within the reproductive age group (15-49 years) (Addis Ababa City Health Bureau 2014).

Clients: In 2014, approximately 301,316 clients utilized family planning and HIV services in the 80 public health centres (Addis Ababa City Administration Health Bureau 2014). Of the clients, 225,987 used HIV services and 75,329 used family planning services.

Service providers: A total of 1,200 service providers are responsible for family planning and HIV services in all 80 public health centres in Addis Ababa (Addis Ababa Health Bureau 2014).

1.6.4.2 Sampling

The researcher used probability sampling to randomly select samples from a defined population (Loiselle, Profetto-McGrath, Polit & Beck 2011:212). Using simple random sampling, the researcher selected 31 of the 80 public health centres. From these health centres, 403 patients/clients and 305 service providers (173 nurses, 83 midwifery nurses, 44 public health officers and 5 physicians) were selected. The required sample size was determined by using a single population proportion formula (LoBiondo-Wood & Haber 2010:230) (see chapter 3 for full discussion).

1.6.4.3 Data-collection instruments

The researcher conducted a literature review and then developed two questionnaires for data collection. A self-administered questionnaire was developed to collect the data from service providers between 1 and 12 June, 2015 (see chapter 3 and Annexure 2 for details). A structured questionnaire was developed to be used as a structured interview (to be completed by trained data collectors) to collect data from clients between 15 and 26 June 2015. The questionnaires were completed by data collectors in an interview with the clients to accommodate their literacy levels (see chapter 3 and Annexure 1 for details).

A pre-test was conducted to determine the clarity and relevance of the questionnaires to improve the reliability of the study (Delport & Roestenburg 2011:195). The researcher pre-tested the questionnaires at two public health centres in non-study areas close to Addis Ababa. Ten randomly selected service providers who were working in family planning and HIV services and 10 clients who came to the public health centres for family planning and/or HIV services voluntarily participated.

The researcher revised the questionnaire based on the feedback from the pre-test (see chapter 3 for details). The questionnaires were initially prepared in English and translated to the local language (Amharic). The local language was again translated to

English to make sure that each question had the same meaning in both languages. A consent form was attached to the final questionnaires (see Annexure 3 and 4).

1.6.4.4 Validity and reliability

The quality of a research instrument is determined by its validity and reliability (see chapter 3).

Reliability was ensured because the data-collection methods were consistent and did not distort the findings in order to meet the requirements for reliability. The researcher ensured that all questions had consistent meaning for all service provider and client respondents. Data collection was supervised by two (2) public health professionals, which enhanced the reliability of the results (see chapter 3 for details).

In order to ensure the validity of the study, data cleaning was done by supervisors (see chapter 3). Double entry method (EPI info and SPSS software) was done and checked for data quality. Multivariate analysis, randomisation and triangulation were used to interpret the findings in phase 1 (Hesse-Biber 2010:3).

1.6.4.5 Data collection

Six (6) data collectors who had completed a diploma nursing programme were recruited and trained to collect the data for the first phase of the study (see chapter 3 for details). The data collectors as well as the two supervisors also received training before data collection commenced. The heads of the sampled public health centres received an institutional support letter from the Addis Ababa City Health Bureau to inform them about the study prior to data collection. Service providers signed the voluntary consent form after they had read and understood the information letter and completed the self-administrated questionnaires between 1 and 12 June 2015. The data collectors read and explained the content of the informed consent forms and clients signed after they agreed to participate in the study. The data collectors interviewed the respondents at the selected public health centres when they came for family planning and/or HIV services. Data collection took place between 15 and 26 June 2015. The completed questionnaires were received on a daily basis in the evening of each data collection

day. Two (2) public health professionals supervised the overall data-collection process, supported by the researcher who was responsible to oversee the overall process.

1.6.4.6 Data analysis

A data analyst and statistician entered and double-checked the data entry using Epi-info version 3.4.1 and SPSS version 20.0. Induction reasoning was applied to analyse the quantitative data (Polit & Beck 2014:605).

The statistician statistically analysed the data, using descriptive analysis and summarising by means of frequencies and cross-tabulation. Significance testing between variables was computed by odds ratio, p-value and 95% confidence interval, and bi- and multivariate logistic regressions.

The collected data was stored in a password-protected file for the soft copy, which had no name. No one had access to the data except the researcher and data analyst. Hard copies of the questionnaires and data were kept in a locked cabinet to which only the researcher had access. The recorded documents will be destroyed/burned after the study is examined.

1.6.5 Phase 2: Qualitative

1.6.5.1 Unit of analysis

The unit of analysis was all 24 programme officers (25-65 years old) who were responsible for family planning and/or HIV programmes in all sub-city health offices, Addis Ababa city and national level. The 24 programme officers served as the unit of analysis (see chapter 5 for details).

1.6.5.2 Sampling

No sampling was done in this phase as all 24 programme officers responsible for family planning and HIV programmes at sub-city, city and national level were recruited to participate. They participated in two separate nominal group discussions. Each group

consisted of 12 participants, namely half family planning programme officers and half HIV programme officers (see chapter 5).

1.6.5.3 Nominal group discussion

The study used Van de Ven and Debecq's (1972) six key steps of a nominal group technique as adapted by Roets and Lubbe (2015:154) to collect data from the participants. An expert who has a PhD and extensive experience and skill in the nominal group technique (NGT) facilitated both nominal groups (see chapter 5) and followed the rules and steps of the nominal group during facilitation. The following instruction was given to participants: "Please write down the strategies that can facilitate the implementation of an integrated family planning and HIV services at the public health centre level".

The facilitator followed the six steps (Roets & Lubbe 2015:154), namely:

- Open the session
- Silently generate ideas in writing
- Round-robin recording of ideas
- Serial discussion of the ideas
- Vote to select the most important ideas
- Discuss the selected ideas (see chapter 5)

The facilitator gave the participants an information sheet on the purpose of the study and the nominal group, and a consent form (see Annexure 5).

1.6.5.4 Trustworthiness

Trustworthiness is "the degree of confidence qualitative researchers have in their data, and is assessed using the criteria of credibility, dependability, confirmability, transferability, and authenticity" (Polit & Beck 2014:584).

- *Credibility*: This refers to confidence in the truth of the data and interpretation of data. Qualitative research must strive to establish confidence in the truth of the

findings for the particular participants and contexts in the study. Credibility involves carrying out the study in a way that enhances the believability of the findings, and taking steps to demonstrate credibility in the research report (Lincoln & Guba 1985:299; Polit & Beck 2014:585). The researcher was the primary facilitator of the nominal group sessions. Since the nominal groups had good experience in family planning and HIV programme management and coordination at the public health centre, sub-city and city administration level, they agreed to participate in the analysis. Therefore the analysis was done with the active participation of the nominal group participants.

- *Dependability*: This refers to the stability (reliability) of data over time and conditions. This means that the findings of an inquiry should be the same, if it were replicated with the same participants in the same context. Credibility cannot be achieved in the absence of dependability (Polit & Beck 2014:585).

- *Confirmability*: This refers to objectivity, that is, the potential for congruence between two or more independent people about the data's accuracy, relevance, or meaning. This is concerned with establishing that the data represent the information participants provided, and that the interpretation of the data does not reflect researcher bias, motivation or perception (Polit & Beck 2014:585). In this study, triangulation of data-collection methods, member checking and flexibility were applied to ensure neutrality of data collection.

- *Transferability*: This refers to the potential for extrapolation; that is, the extent to which findings can be transferred to or applied to other settings and groups (Polit & Beck 2014:585). In this study, the researcher provided detailed descriptions of the methods and contexts and left an audit trail so that other researchers can transfer to similar context. An audit trail involves a record of evidence to verify confirmability of the data. Moreover, thick descriptions of the research process enable evaluation of the applicability of the data to other contexts (Polit & Beck 2008:539).

1.6.5.5 Data collection

The nominal group discussions were conducted on 26 and 28 October 2016 in a small conference room at Soramba and Siyonat Hotels, respectively, in Addis Ababa. The nominal group participants were programme officers responsible for family planning and HIV programmes at the sub-city health offices in Addis Ababa. The Addis Ababa Health Bureau was responsible for recruiting the participants and arranging the dates and venues for the nominal group discussions. All the nominal group participants received an official invitation from the Addis Ababa Health Bureau, who acted as gatekeeper (see Annexure 5). The Bureau forwarded the participants' contact details to the researcher and confirmed their willingness to participate. The participants were informed that participation was voluntary and that they were free to leave the study at any stage, without any penalty. All the participants agreed and signed consent forms and returned them to the facilitator (see chapter 5 for details).

1.6.5.6 Data analysis

The data obtained from the NGT was analysed through multiple group analysis. The researcher applied the step-by-step procedures of multiple group analysis (Roets & Lubbe 2015:156-164), using electronic formats that simplified the steps to be followed with multiple group analysis. The participants were actively involved in the analysis of the data in their own group, and the multiple group analysis was done by the researcher and co-coder (see chapter 5 for full discussion).

1.7 ETHICAL CONSIDERATIONS

When people are used as study respondents, care "must be exercised in ensuring that the rights of the respondents are protected" (Polit & Beck 2014:170). The researcher observed the ethical principles of informed consent, confidentiality and privacy, self-determination and beneficence in both phases of the study (De Vos, Strydom, Fouché & Delport 2011:119).

Ethical approval and permission to conduct the study was obtained from the Research Ethics Committee, the Department of Health Studies at the University of South Africa (see Annexure 6). Institutional consent was obtained from the Addis Ababa City

Administration Health Bureau and the institutional support letter was given to each public health centre to ensure that the required ethical standards were maintained (see Annexure 7).

All the respondents were informed of the purpose of the study; that participation was voluntary and that their privacy, anonymity and confidentiality would be assured. Informed consent was obtained from all the respondents (see Annexure 3 and 4). Chapter 3 discusses the ethical considerations in detail.

All the nominal discussion participants received an official invitation from the Addis Ababa City Administration Health Bureau who acted as gatekeeper for the study (see Annexure 5). The participants provided their contact details to the gatekeeper, who informed the researcher about their willingness to participate. All the information was kept confidential (see chapter 5).

1.8 DEFINITIONS OF KEY TERMS

Service delivery refers to the management and delivery of quality and safe health services to ensure a continuum of health promotion, disease prevention, early diagnosis, treatment, disease management, rehabilitation and palliative care services. Quality health care should be provided at the different levels and sites of care within the health system, according to the needs of individuals and families through the lifespan (WHO 2016a:2).

Service integration means to join together different kinds of services or operational programmes in order to maximize outcomes; e.g., by organizing referrals from one service to another or offering one-stop comprehensive and integrated services (Johnson et al., 2012:3).

A **strategy** refers to a general plan of action for achieving one's goals and objectives (Nickols 2016:3).

A **strategic plan** refers to a recognized set of activities or broad plans of action necessary to achieve an organisation's goals and objectives (Nickols 2016:6).

Facilitation refers to a way of enabling service providers to implement the integration of services by providing support (Dogherty, Harrison, Graham et al., 2013:1).

Health centre can be defined as an organization or group of institutions providing all types of basic medical care and preventive services to a certain population (*Farlex Partner Medical Dictionary* 2012).

Clients of reproductive age refer to all women between the ages of 15 and 49 (Rutaremwa & Kabagenyi 2016:494).

1.9 OPERATIONAL DEFINITIONS

In this study, the following terms are used as defined below:

Service integration refers to the integration of family planning and HIV counselling and testing as well as other health care services provided in a public health centre.

HIV service includes HIV counselling and testing, anti-retroviral therapy (ART), prevention of mother-to-child transmission and provider initiated HIV testing and counselling.

Family planning methods also called **contraceptives** include modern (combined oral contraceptive pills, progestin-only pills, progestin-only injectable contraceptives sub-dermal implants, intrauterine devices (IUDs) and permanent family planning methods) and natural (abstinence, fertility awareness based methods, lactation amenorrhea method (LAM) and withdrawal family planning methods).

Strategy refers to an identified plan of action that can facilitate the implementation of integrated family planning and HIV services at the public health centre level.

Strategic plan refers to the development of a plan of action that can facilitate the implementation of integrated family planning and HIV services at the public health centre level.

Facilitation refers to a way to enable the service providers/programme officers to implement the strategic plan at public health centres in Addis Ababa, Ethiopia.

A **public health centre** is a service delivery point that provides both family planning and HIV services and is owned by the national government, and located in Addis Ababa.

Family planning integration into HIV services refers to when the family planning service is added to the existing HIV services at public health centres in Addis Ababa.

HIV integration into family planning services means when HIV service is added to the existing family planning services at public health centres in Addis Ababa.

Family planning and HIV service integration refers to both family planning integration into HIV services and HIV integration into family planning services at public health centres in Addis Ababa.

Clients refer to women of the reproductive age group, between the ages of 18 and 49 years, considering the legal age limit for giving written consent to participate in research, in Ethiopia (Ethiopian Ministry of Science and Technology 2014:38).

Service providers refer to nurses, midwifery nurses, health officers and physicians (18-65 years old) working in family planning and HIV services at the time of data collection.

Programme officers refer to government employees (25-65 years old) who were responsible for family planning and/or HIV programmes in all sub-city health offices of Addis Ababa at the time of data collection.

1.10 CHAPTER LAYOUT

The study consists of eight chapters. Table 1.1 outlines the chapters.

Table 1.1 Chapter layout

Chapter 1	Overview of the study
Chapter 2	Literature review
Chapter 3	Research methodology of phase 1
Chapter 4	Data analysis and interpretation and data presentation phase 1
Chapter 5	Research methodology phase 2
Chapter 6	Data collection, analysis and interpretation and literature control phase 2
Chapter 7	Strategic plan development and validation
Chapter 8	Conclusions, limitations and recommendations

1.11 SUMMARY

This study examined the challenges and opportunities of the integration of family planning and HIV services for the purpose of developing a strategic plan that could facilitate the implementation of an integrated family planning and HIV services programme at the public health centre level in Addis Ababa. The successful integration of family planning and HIV services would contribute to improving child and maternal health because this is the impact to be measured in the long term. This chapter briefly described the purpose and objectives, research design and methodology and phases of the study. Chapter 2 discusses the literature review undertaken for the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter discusses the literature review conducted for the study. A literature review conveys what is currently known regarding the topic of interest and assists researchers to extend their knowledge of the phenomenon under study (Polit & Beck 2014:105).

The literature review focused on the inputs for family planning and HIV services, as well as integrated health services. Inputs refer to the financial, human and medical resources used in a programme or policy (Rogers 2014:14). In this study, the inputs included geographic accessibility, human resources, fiscal resources, medical resources, infrastructure, available strategies, guidelines, policies and behavioural change communication for the use of family planning and HIV services. The literature review focused broadly on three aspects, namely family planning services, HIV service and the integrated health care services, to enable the development of a relevant questionnaire for this study. The databases and search engines of PubMed, Directory of Open Access Journals, Global Health, Google Scholar and POPLINE were utilized. The search words used were family planning, contraceptives, HIV/AIDS, family planning services, HIV/AIDS services, integrated health services and integration of family planning and HIV services.

The researcher used the Change Logic Model as the theoretical basis of the study. The literature review covered the change logic model and specifically the inputs that are required to improve the integrated health services.

2.2 CHANGE LOGIC MODEL

The change logic model was developed by the W.K. Kellogg Foundation to illustrate the connection between the plan of action and the desired results of a certain programme (W.K. Kellogg foundation 2004:5). In this study, the plan of action was the planning of the research process/activities and the desired results were the final product of this

research (developed and validated strategic plan) (see chapter 7 for discussion). The researcher considered the change logic model appropriate as the basis of the study. Figure 2.1 illustrates how the change logic model was applied to describe the programme fundamentals (inputs, process/activities, outputs, outcomes and impact) to the intended results, namely the outputs (identified challenges, opportunities and strategies) which were the basis for the outcome (developed and validated strategic plan) of this study.

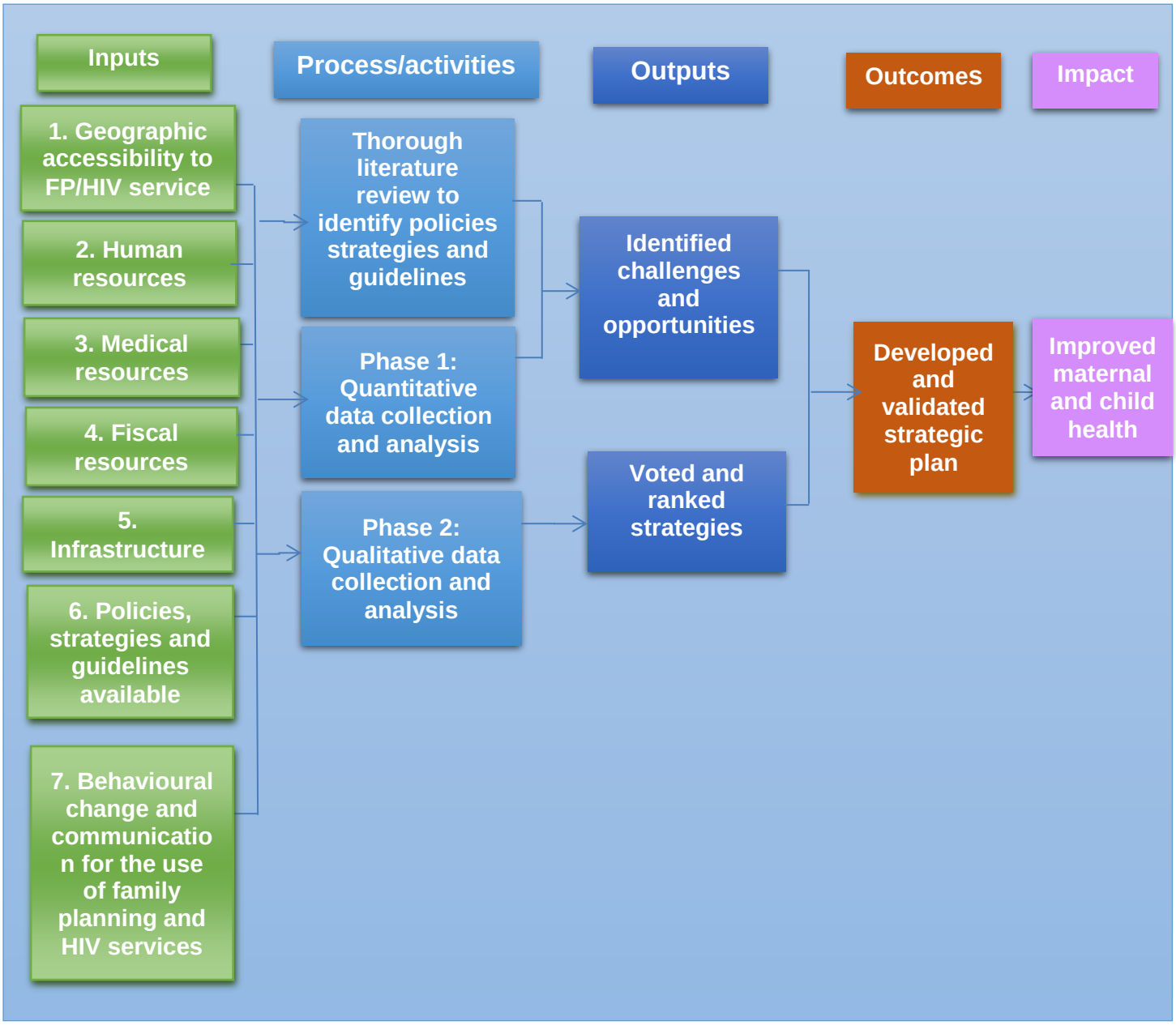

Figure 2.1 Change logic model

Adapted from W.K. Kellogg Foundation (2004:2)

In this study, the change logic model was applied and used as follows:

- **Inputs** refer to the financial, human and material resources used in a programme or policy (Rogers 2014:14). The inputs in this study were geographic accessibility to family planning/HIV services; human resources; medical resources (IUD/implant insertion/removal sets and voluntary surgical sets for vasectomy and tubal ligation); family planning methods or contraceptives, HIV test kits and ART (Antiretroviral therapy); fiscal resources; infrastructure (building facilities with adequate rooms and space, roads and transportation); policies, strategies and guidelines; behavioural change and communication materials, like leaflets and booklets for the use of family planning and HIV services as well as the integrated health services.

- **Process** or activities refer to the processes, tools, events, technology, and actions that are an intentional part of programme implementation (W.K. Kellogg Foundation 2004:2). The activities in this study were the processes in place to support and produce desirable outputs. These activities included the identification of policies in place, strategies implemented and guidelines used; literature reviewed; the data obtained in phase 1 and quantitative and qualitative data collection, analysis and interpretation (see chapter 2 and 4 for discussion).

- **Output** refers to the immediate effects of programme/policy activities, or the direct products or deliverables of programme/policy activities (Rogers 2014:14). The outputs in this study referred to the identified challenges and opportunities of integrated family planning and HIV services at the public health centre level and the strategies identified by programme officers (see chapter 4 and 6).

- **Outcome** refers to the likely or achieved short-term and medium-term effects of a programme policy's/or strategies' outputs (Rogers 2014:14). In this study, the outcome was a developed and validated strategic plan that can facilitate the implementation of integrated family planning and HIV services at the public health centre level (see chapter 7, section 7.4).

- **Impact** refers to positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or

unintended (Rogers 2014:14). The impact in this study was the integration of family planning and HIV services at the public health centre level to improve mother and child health in the long term. *This could not be measured during the study as it will only be measurable in the long term.*

Although the study was based on the change logic model, Ortrun's (2002) process planning model as adapted by Lubbe, Roets and Van Tonder (2014:6397) was used to develop the strategic plan (see chapter 7, section 7.2).

Family planning and HIV services are discussed separately next followed by the integration of health services.

2.3 FAMILY PLANNING

Globally, an estimated 34 million people are living with HIV/AIDS and 8 million people are on antiretroviral therapy. In 2012, 23.5 million people in sub-Saharan countries were living with HIV/AIDS (UNAIDS 2012:6-7). Many of these were women in the reproductive years, but did not necessarily want to be pregnant (UNAIDS 2012:29). Although the majority of women want to avoid or plan their pregnancies, in developing countries they do not always have access to modern contraceptives thus contributing to the global number of unplanned and unwanted pregnancies (Singh & Darroch 2012:10).

Three hundred and fifty thousand (350,000) women die and 50 million suffer annually from complications of pregnancy and pregnancy related complications (Lakew, Reda, Tamene Susan & Deribe 2013:5). Ethiopia, India, Nigeria, Pakistan, Afghanistan and the Democratic Republic of Congo) are the six countries that contribute approximately 50% of maternal deaths (Lakew et al., 2013:6). The Ethiopian maternal mortality ratio indicated 871, 673, and 676 per 100,000 live births in 2000, 2005 and 2011, respectively (Central statistics Authority & ICF International 2011:267). In order to increase access to family planning in all developing countries, the London family planning summit calls to give priority to address the family planning needs of an additional 120 million women by 2020 (UNFPA 2017b). The coverage would be exceeding by 10% from the current contraceptive prevalence of 40% in 2015 in least developed countries (UNFPA 2017b).

In developing countries, the proportion of married women using a method of contraception increased from 10% in the 1970s to nearly 60% in the late 1990s. However, there is still a high prevalence of unplanned pregnancy, a high unmet need for family planning and a low contraceptive prevalence rate (Fotso, Speizer, Mukiira et al., 2013:71). In some African countries, the contraceptive prevalence rate was only 15% (National Population Commission & ICF International 2013:6-7) and 9% (Ali & Okud 2013:102) in Nigeria and South Sudan, respectively.

According to the World Health Organization (WHO 2011), family planning allows individuals and couples to anticipate and attain their desired number of children and the spacing and timing of their births. Effective family planning can therefore be achieved through the use of family planning services (WHO 2011).

2.3.1 Family planning services

A service is an action or effort performed to take care and satisfy a need or to fulfil the demand of clients by providing and delivering professional, helpful, high quality service and assistance (McKinney 2015:1). A family planning service provides family planning methods/contraceptives to prevent pregnancy; help women and men to plan and space births; prevent unintended pregnancies; reduce the number of abortions, and offer pregnancy testing and counselling (Centers for Disease Control and Prevention [CDC] 2014:4).

The family planning service includes several services besides the family planning services offered during the visit for clients (MOH Ethiopia 2011:26). This helps to support clients who want to conceive (prevention and management of infertility), provide screening and treatment of sexually-transmitted infections (STIs), including HIV (CDC 2014:4). Sexually-transmitted infections (STIs) can be screened and managed using a syndromic approach in the management of STI and service providers should emphasise education on the risk behaviours and promote the use of condoms for dual protection (Otieno, Ndivo, Oswago et al., 2014:851-859). Integrated health care services are discussed in section 2.5.

At family planning services, the service providers, mostly nurses and midwives, are responsible to educate the clients on the various family planning methods available so

that they can make an informed choice on effective family planning methods (Dehlendorf, Krajewski & Borrero 2014:659-673). Various types of family planning methods are available at the family planning services (see section 2.3.5.1 for details).

2.3.2 Steps of family planning services

The nursing process refers to the work method used in nursing and research, logical analysis and analytic reasoning, and the identification of problems and provision of health care services (Huitzi-Egilegor, Elorza-Puyadena, Urkia-Etxabe & Asurabarrena-Iraola 2014:772-777). Among the challenges to the effective nursing process are a low level of understanding of the nursing process, different views on the nursing process, lack of knowledge and awareness among service providers on the execution of the nursing process, support of managing systems and problems related to recording the nursing process (Zamanzadeh, Valizadeh, Tabrizi et al., 2015:411). Five basic consecutive nursing steps must be carried out by service providers to offer a family planning service at the health facility level (Alfaro-Lefevre 2014:3). The five steps are nursing assessment; nursing diagnosis; planning; implementation, and nursing evaluation (American Nursing Association [ANA] 2016).

The nursing process and the family planning service begin with a nursing assessment to establish rapport, and history-taking pertaining to the current health status, and family and social histories to assess clients. The assessment includes clients' sexual, psychological and cultural aspects to identify the factors or the risks that might affect the decision to use family planning methods (Dehlendorf et al., 2014:659-673). Service providers should take a history of clients' medical history, pregnancy intention, reproductive life plan, family planning methods preferences and experiences, and sexual history (Maria, Guilamo-Ramos, Jemmott et al., 2017:44-45). The complete history taking is used to assess clients' risk status related to sexual practices and STIs, including HIV (Tessema, Mahmood, Gomersall et al., 2017: e0179167).

In this study, as part of the nursing assessment, service providers must provide adequate information during counselling sessions on the available family planning to help clients to choose safe and appropriate family planning methods (Barden-O'Fallon 2017:57). The information must include the effectiveness, possible side effects, complications of each family planning method and protection from STIs, including HIV

and other medical risk assessment during the session (Tessema, Mahmood, Gomersall, Assefa et al., 2017:e0179167). Provision of adequate information regarding on the benefit, effectiveness and possible side effects of family planning methods will assist clients to make an informed decision on their own family planning methods (Dehlendorf et al., 2014:659-673).

Nursing diagnosis allows nurses to identify the client's health needs (Hakans 2012:54). Service providers must conduct a physical examination and order laboratory tests essential to make a diagnosis (American Nursing Association 2016). Service providers should measure the blood pressure; assess the current status of pregnancy, pelvic examination, if indicated, cervical cancer screening, HIV service and some laboratory tests as ordered (CDC 2014:11).

The next step is planning, which is the process of developing a plan and establishing goals in order to achieve the desired outcome, such as providing a comprehensive family planning service (Abdelkader & Othman 2017:76-82; Yoost & Crawford 2016:105-107). Based on the assessment and diagnosis, service providers should formulate a specific goal for the client (Yoost & Crawford 2016:110). A care plan should involve the steps to be taken in order to achieve the desired goal (Abdelkader & Othman 2017:76-82). In the context of this section, service providers must develop a plan on how to assist the client to choose the applicable family planning method of choice, and appropriate for each individual client.

The implementation phase follows, which is the actionable part of the process where the service providers implement the care plan (Yoost & Crawford 2016:118). Service providers should implement the nursing process properly to provide quality health care services (Baraki, Girmay, Kidanu et al., 2017:54). In this step, service providers provide the right family planning methods as per the nursing plan.

The last step of the nursing process is evaluation. Evaluation is the professional assessment of the success of the planning and implementation process to ensure that service providers are making progress towards their goals and achieve the desired outcome (Yoost & Crawford 2016:123). Evaluation in this study referred to the assessment to evaluate whether the correct and quality family planning was accessible and provided as needed by clients (Steinfeld, Newmann, Onono et al., 2013:2-5).

2.3.3 Input 1: Geographic accessibility to family planning services

Contraceptive coverage increased from 14% in 2005 to 29% in 2011 (Central Statistics Authority & ICF International 2011:97) and 42% in 2014 (Central Statistics Authority 2014:33) in Ethiopia. Urban Ethiopian women have better access to family planning services than those in the rural areas because of geographic accessibility of services (Central Statistics Authority & ICF International 2011:91).

It is important to describe the ratio of health facilities to the population that determines the accessibility of family planning services. In Ethiopia the ratio of public health centres to the population is 1:25,395 (MOH Ethiopia 2015a:53), which is almost equivalent to the Ethiopian national standard set by MOH, namely 1:25,000 (MOH Ethiopia 2015a:55). In Rwanda, the increased number of health facilities had a positive impact on access as well as utilization of family planning services (Muhoza, Rutayisire & Umubyeyi 2013:5-6).

Because of geographic distances, poor accessibility to family planning methods exists and therefore, the fertility rate in some African countries is still high. In Nigeria, the total fertility rate is 5.5, which is almost similar to South Sudan (National Population Commission & ICF International 2013:5-6). The total fertility rate of an Ethiopian woman is 4.8 (Central Statistics Authority & ICF International 2011:81) and the unmet need for family planning is 25% (Central statistics Authority & ICF International 2011:81-100). Most of the unmet need is among unmarried young persons and persons living with HIV/AIDS (Singh & Darroch 2012:1).

Various factors affect the accessibility of family planning services, including the geographic distance to the facility (see fig 2.1). In this regard, the availability of transportation can be a problem or an opportunity for utilising family planning services (Eliason, Awoonor-Williams, Eliason et al., 2014:65). A health facility located less than 5 km is more likely to enhance the use of modern family planning methods, with a 7-8% increase in utilization (Skiles, Cunningham, Inglis et al., 2015:20-30). The lack of transportation (when the facility is located further than 5 km) is also a factor that hinders clients from using family planning services (Population Council 2015, Eliason et al., 2014: 65).

2.3.4 Input 2: Human resources

In order to render quality family planning services, human resources are needed. Human resources are one of the most important components (inputs) for family planning service delivery (Rogers 2014:14). The shortage of service providers (nurses, midwives, health officers and physicians) has a negative effect on the provision of quality family planning service in Ethiopia (Smit, Church, Milford et al., 2012:48).

An inadequate number of service providers, such as nurses, midwives, health officers and physicians in the health sector negatively impacted on the achievement of the Sustainable Development Goal (SDG) 3 in low- and middle-income countries, including Ethiopia (WHO 2015a, UN 2015b). In order to achieve the SDG 3 (good health and wellbeing), it is important to increase the number of nurses and midwives as they are the major service providers to offer family planning services that can contribute to the reduction of the global maternal mortality ratio to less than 70 per 100,000 live births (UN 2015b).

In Ethiopia, the physicians, health officers, midwives and nurse to population density or ratio in the public health sector is 0.8 per 1,000 (MOH Ethiopia 2015a:46,108). This is very low compared to the WHO standard of 2.3 physicians, nurses and midwives per 1,000 population (WHO 2016b). Specifically, the lack of midwifery and nurses contributes to maternal and child morbidity and mortality (WHO 2014b:17-20).

In order to maximize the uptake of family planning services, appropriate utilization of the health workforce is also crucial to improve the quality of family planning services (Knowledge for Health Project 2016a) to meet the SDGs and other targets (UN 2015b) is to be reached. This can only be achieved if the numbers of service providers (nurses, midwives, health officers and physicians) are increased, the current workforce is effectively utilized to enhance work performance and productivity, reduces costs associated with absenteeism; attracts experienced service providers and retains existing service providers (Sweeney, Obure, Prestholt et al., 2014:42). The efficient use of service providers can contribute to the provision of family planning services within 10 to 15 minutes without long waiting times, one of the motivating factors that encourage

clients to use family planning services (Marlow, Maman, Moodley & Curtis 2014:175-199).

Good benefit packages, improved occupational safety of nurses, increased staffing (better the ratios) as well as good leadership and governance (Oyetunde & Ayeni 2014: 590-601) can improve the retention of service providers, thereby increase the numbers of service providers that can enhance effective family planning services. The provision of integrated services might be one of the strategies to positively influence the efficient use of limited number of nurses, midwives, health officers and physicians in developing countries (Warren, Mayhew & Hopkins 2017:97) (see section 2.5).

The number of service providers however is not the only requirement to improve the health care services, such as family planning and HIV services, but competent service providers like obstetricians and gynaecologists, physicians, health officers, nurses, midwives and health extension workers are needed in the Ethiopian context (MOH Ethiopia 2011:20-32). One strategy is to improve the competence of the current health workforce with effective, efficient and sustainable continuing professional development like providing in-service training, attending conferences and workshops (MOH Ethiopia 2015a:108). Another strategy is to provide quality training to the new cadre of health care workers, including nurses and midwives (Yigzaw, Ayalew, Kim et al., 2015:130).

2.3.4.1 Training of service providers

In this study, service providers refer to nurses, midwives, health officers and physicians. The literature review on training focused mainly on nurses and midwives as they are mostly responsible for providing family planning methods to clients (Dehlendorf et al., 2014:659-673).

Globally, diverse bodies are responsible for regulating nursing practice and contribute to the training requirements. Nursing and midwifery councils, such as the South African Nursing Council (SANC) in South Africa (Rispel 2015:10), the Australian Nursing and Midwifery Accreditation Council (ANMAC) in Australia (Australian Nursing and Midwifery Accreditation Council 2017), and the Nursing Midwifery Council in the UK (Nursing Midwifery Council 2015:4) set or agree with the standards for nursing and midwifery practice, and contribute to requirements of quality training for nurses and midwives

using their own country level standards (International Confederation of Midwives 2016). In Ethiopia, an official agency, the Higher Education Relevance and Quality Agency (Higher Education Relevance and Quality Agency 2016) controls the standard of all health professional training, including nurses, midwives, health officers and physicians for all levels qualifications (Higher Education Relevance and Quality Agency 2016).

The education of health care service providers differs from country to country (McCarthy, Gross, Verani et al., 2017:48). Training institutions vary from higher education institutions that offer four-year degree programmes in nursing and midwifery to three-year diploma programmes at college level (McCarthy et al., 2017:48). The duration of nursing and midwifery education ranges between two and six years in various countries (UNFPA 2014b). In Ethiopia, midwifery training is available for nurses who have already completed a diploma in nursing and for the duration of 18 months (UNFPA 2012) as per the standard of post nursing midwifery education endorsed by International Confederation of Midwives (International Confederation of Midwives 2016).

In Ethiopia, the health officer profession is an undergraduate degree programme completed in four years and mostly assigned to work in the public health sector (Gedefaw, Tilahun & Asefa 2015:305-315).

The duration of training and the criteria for selection to nursing training programmes differ from country to country. In Ethiopia, the selection criteria to join higher education institutions are that the student must pass in secondary school and preparatory classes (commonly 300 marks and above out of 700, as the decision of national education assessment and examination agency varies every year), have a background of science studies like biology, chemistry, general sciences and fulfil certain criteria to enter the health profession for degree programme in public higher institutions (Higher Education Relevance and Quality Agency 2016).

The higher education institutions should provide quality education for service providers (nurses, midwives, health officers and physicians) to equip them with the required competencies in order to enable graduates or diplomats to provide a quality service after completion of the study (USAID 2015:25). The training must address the cognitive, affective and psychomotor domains of a profession to ensure they are acquainted with the required competency level for practice (International Confederation of Midwives

2016). The core competencies include theoretical knowledge, professional values and conduct, skills of clinical practice and decision making, communication, leadership, management and team building, and professional competencies (Nursing and Midwifery Board of Ireland 2016). All these core competencies are required for nurses, midwives, health officers and physicians to provide quality family planning services (Moule & Goodman 2014:10) and contribute to the reduction of maternal deaths (reduce the global maternal mortality ratio to <70 per 100,000 live births) (UNFPA 2015) as part of SDG 3 to be achieved by 2030 (UNFPA 2016).

Sufficient human resources with the required competencies are not the only inputs needed to render a quality family planning services. Medical resources are also of great importance.

2.3.5 Input 3: Medical resources

In this study, medical resources include medical equipment and supplies that contribute to deliver family planning services at facility level as part of the key inputs in the delivery of family planning services.

Medical equipment and supplies, such as family planning methods or contraceptives, insertion and removal sets for Intrauterine devices (IUDs), surgical sets used for examination and procedure purposes, cotton wool and swabs, must be available if a comprehensive family planning service is provided that can contribute to enhance the utilization of the service (Assaf, Wang & Mallick 2017:346). A functioning logistic system of equipment and supplies that includes forecasting, procurement, and distribution of family planning methods or contraceptives contributes to improved family planning service (High Impact Practices in Family Planning 2012).

2.3.5.1 Family planning methods

The availability of family planning methods and supplies is essential to improve contraceptive use and reduce unwanted pregnancy (WHO 2014b), whilst unavailability of thereof is one of the major reasons that hamper the delivery of family planning services. Family planning methods such as combined oral contraceptive pills, progestin-only pills, progestin-only injectable contraceptives and condoms (see section 2.4.6.1 for

discussion on condoms) are regularly available in the family planning facilities whereas subdermal implants (Etonogestrel- or Levonorgestrel-releasing implants), Intrauterine devices (IUDs) and permanent family planning methods are mostly unavailable in developing countries (Assaf et al., 2017:346). In order to ensure universal access to family planning service, availing all the necessary family planning methods is vital to address the high demand for spacing and limiting the number of children in developing countries (UNFPA 2016).

Family planning methods can be classified as natural or modern (WHO 2011). Family planning methods are considered "natural" if they are not mechanical or do not result in hormone manipulation (Stoppler 2017). Modern family planning methods can be defined as a product or medical procedure that interferes with reproduction after sexual intercourse and can be categorized as hormonal and non-hormonal methods (Hubacher & Trussell 2015:420-421). Hormonal methods contain the hormones estrogen and progestin or progestin only, and are a safe and reliable way to prevent conception. Combined oral contraceptive pills (OCP), injectable contraceptives, progesterone containing IUDs, and implants are hormonal types while non hormonal family planning methods do not contain any hormones, but are copper bearing IUDs or condoms (Kaunitz 2017:1) (see sections 2.3.5.1.1-2.3.5.1.1.6).

2.3.5.1.1 Combined oral contraceptive pills (OCP)

Combined oral contraceptive pills (OCP), also called “the pill’’, are a hormonal family planning method made from progesterone and oestrogen hormones used to prevent conception for 24 hours (Stewart & Black 2015:6-11). The effectiveness is about 91% to prevent pregnancies (Stewart & Black 2015:8). OCPs are not so popular among the different family planning methods as there are some possible side effects such as nausea, headache, acne (spots on the face), breast pain, weight and mood changes (WHO 2011). The side effects known might be one of the reasons for Ethiopian clients who prefer injectable family planning methods (Central Statistics Authority 2014:34).

2.3.5.1.2 Injectable family planning methods

Veisi and Zangeneh (2013:109-113) state that the injectable intramuscular contraceptive is 97% effective and a hormonal type of family planning method that can be made from either progesterone only (depot medroxy progesterone acetate or DMPA) or a combination of the hormones estrogen and progesterone. Norethisterone Enanthate or DMPA is effective to prevent pregnancy for a three-month period and NET-EN for one month (Veisi & Zangeneh 2013:109). Although injectable contraceptives are less popular in many countries (WHO 2011), they are available, utilized and preferred in some African countries like Ethiopia, Rwanda and Malawi (Singh & Darroch 2012:6). There are also some of the side effects, such as changing menstruation patterns, weight gain, headache, dizziness and mood changes (Veisi & Zangeneh 2013:109) that need to be communicated to clients.

2.3.5.1.3 Implants

Implants are hormonal methods of family planning that contain plastic rods that release progesterone (etonogestrel- or levonorgestrel-releasing implants) (Hesperian Health Guides 2014:213). There are several kinds of implants: Jeddelle has 2 rods which are effective for five years, *Implanon* is a single rod which is effective for three years, Sino-implant has 2 rods and is effective for 4 years (Hesperian Health Guides 2014:213). Implants are a 99% effective method of family planning and 20 times more effective than injectable contraceptives (Shoupe 2016:4). Because of the possible side effects such as headache, dizziness, changes in menstrual periods and breast pain, implants are less popular and about 1% of women in the world prefer them (WHO 2011), although mostly available in Ethiopia (Central Statistics Authority 2014:35).

2.3.5.1.4 Intra uterine devices (IUDs)

Intra uterine devices **(**IUDs) can be classified as non-hormonal (copper bearing IUDs) and hormonal modern family planning methods as some IUDs contain hormones such as Mirena (Nowitzki, Hoimes, Chen et al., 2015:183-185). The copper-bearing intrauterine device (IUD) creates an inflammatory process that kills the sperm and egg to prevent pregnancy (WHO 2011). The most common type of copper-bearing IUDs is TCu-380A that can be effective for up to 10-12 years (WHO 2011). Although IUDs are

the safest family planning methods, there are a few side effects to be observed like irregular bleeding and abdominal pains. IUDs are the most popular (14%) methods in the world and 20 times more effective than injectable contraceptives (Shoupe 2016:4).

2.3.5.1.5 Permanent family planning methods

Permanent family planning is a lifelong irreversible type of modern family planning method which is a simple surgical procedure done by trained service providers for those clients or couples who decide to limit their number of children (Babigumira, Vlassoff, Ahimbisibwe & Stergachis 2015:112-113), thus do not ever want to fall pregnant again. There are two types of permanent family planning methods, namely female sterilization (tubal ligation) and a vasectomy for men (Babigumira et al., 2015:112). It is a 99% effective method of family planning and the most reliable, safe family planning method with minimal side effects. It is the most popular (43%) method for older people who never want to conceive and be pregnant again (WHO 2011).

2.3.5.1.6 Natural family planning methods

The natural family planning methods include abstinence, fertility awareness based methods, lactation amenorrhea method (LAM) and withdrawal (Stoppler 2017). Natural family planning methods are less popular (7%) with high failure rate of up to 30%. Clients need health education on how to use natural family planning methods (WHO 2011) and be aware of the high failure rate.

Besides medical resources, fiscal resources are also needed to enable service providers to provide a family planning service (Chola, McGee, Tugendhaft et al., 2015:e0130077).

2.3.6 Input 4: Fiscal resources

Fiscal resources are the financial resources required for maternal health care services including family planning services (Chola et al., 2015:e0130077). Fiscal resources are one of the key inputs to provide sustainable family planning services and it is essential to mobilize a domestic funding for family planning services in all countries from the government and/or out-of-pocket sources (UNFPA 2015).

Many countries are not able to generate all the necessary financial resources and some developing countries are mostly dependent on donor assistance (WHO 2012a). As described by UNFPA (2015) 71% of the funding for maternal health care services in sub Saharan African countries is supported by donors followed by Asia and the pacific countries (19%). The Ethiopian health expenditure for health is 3.1% from the domestic funding. The family planning spending in Ethiopia is below 10% of the total national health accounts and the major source of funding was from donors (47%) followed by out-of-pocket payments (27.6%) and 24.8% government funding (MOH Ethiopia 2014a:14-15) but the health expenditure, including family planning expenditure, should come from domestic funding. The average spending by each individual on health-related costs is $25 per capita (World Bank 2016) which is less than the WHO recommendation of a minimum spending per person per year of $44 per capita (WHO 2012a). In order to ensure the sustainability of health care services including family planning service, the Ethiopian ministry of health should allocate adequate funding and improve the health expenditure as well as sustain the family planning programme (MOH Ethiopia 2015a:125).

2.3.7 Input 5: Infrastructure

Infrastructure refers to the facility itself as well as the roads, transport, utilities and waste disposal systems that will enable access to and utilization of the facility (Oyekale 2017:172). In this study, infrastructure indicates the availability of building (facility) with an adequate number of rooms and space and transportation to access the family planning services. The lack of transportation to family planning facilities and in instances where long distances have to be travelled to a facility have high cost implications. Clients are less likely to utilize the health facilities for family planning service (Kamran, Tasneem, Parveen & Naizi 2015:8-9).

The availability of adequate rooms and space in a facility can enhance the quality as well as the utilization of a service (MOH Ethiopia 2010:9-10). Most facilities in Ethiopia have adequate rooms and space for the provision of family planning services as required (Assaf et al., 2017: 346).

2.3.8 Input 6: Process - policies, strategies and guidelines

Policies strategies and guidelines are not only inputs but also include a process or activities to identify family planning-related policies in place, strategies implemented and guidelines used. Policies, strategies and guidelines related to family planning are helpful to achieve SDG 3 and ensure universal access to family planning (UNFPA 2016). Family planning is one of the key strategies to reduce maternal mortality to less than 70 per 100,000 live births by 2030 (UN 2013). Therefore global leaders advocated that various efforts be in place to improve access to modern family planning (UNFPA 2017b). In order to address the unmet need of family planning services, various policies, strategies and guidelines are recommended to improve comprehensive family planning services (Irani, Pappa & Dindi 2015:5-6).

The World Health Organization (WHO 2014d) developed global policy briefs, guidelines and strategies to assist its member countries to develop national guidelines to facilitate the provision of family planning services. Some countries endorsed strategic policies on family planning; for instance China introduced a one child policy several years ago to reduce the high population and rapid growth of the population to improve people's living standards (WHO 2014d). In fact, China is also battling with the problem of having a large aging population and the children (1 per family) who are now adults are battling to support their parents. Tanzania also initiated a strategic plan to ensure the accessibility of family planning information and services to balance the rapid population growth and the economy of the country (MOH Tanzania 2012:5-7).

A lack of polices, strategies and guidelines are some of the contributing factors for low utilization of family planning services (Johnson et al., 2012:8). In Ethiopia, the Minister of Health is responsible for the development of policies, strategies and guidelines related to family planning and to regularly update them to incorporate new developments related to family planning (MOH Ethiopia 2012). The following guidelines, policies and strategies were developed to improve access to family planning services, namely the national family planning service guideline; national reproductive health strategy; population policy; youth reproductive health strategy; national youth policy, and standards on youth-friendly reproductive health service (MOH Ethiopia 2011:15-17)

Although the family planning service is commonly integrated with other reproductive health services such as HIV services, the integrated health care services are provided with interruptions because most of these documents did not elaborate about the integrated health care services in Ethiopia (refer section 2.5 for details).

2.3.9 Input 7: Behavioural change and communication for the use of family planning service

Behavioural change communication (BCC) is an approach to positively influence the behaviour of clients to use family planning services because clients' behaviour can be influenced by knowledge, beliefs, ideas and feelings (Krenn, Cobb, Babalola et al., 2014:427-443). It is essential to reduce negative beliefs, myths and misconceptions regarding family planning through continued communication that informs clients to enable them to make informed decisions on family planning methods (Steinfeld et al., 2013:2-5). Behavioural change and communication is an input that promotes behaviours to improve the positive health outcome of individuals by using different channels of communication (Castle & Askew 2015:4-10). Mass media such as radio and television and the distribution of printed materials (newspapers, leaflets and posters) are the most common types of communication channels used to disseminate information that can contribute to a change in individuals' behaviour that improves utilization of family planning services (Oyedele, Wright & Maja 2013:95). Lack of health education and unavailability of printed materials negatively affects the utilization of family planning services (Deressa, Addis, Demissie et al., 2015:3).

There are also other factors that affect the utilization of family planning services.

2.3.10 Other factors associated with the utilization of family planning services

As discussed above, the key inputs or process/activities (geographic accessibility, human resources, fiscal resources, medical resources, infrastructure, policies, strategies and guidelines available and behavioural change and communication for the use of family planning) have an impact on the accessibility of services. However, factors such as a lack of knowledge of family planning, people's educational level, lack of male involvement as well as religious and cultural beliefs also affect the utilization of family planning services.

2.3.10.1 Knowledge

knowledge regarding family planning (the benefits, types, contraindications, advantages, disadvantages, side effects) is one of the positive influencing factors to enhance the utilization of family planning services (Alkaiyat, Schaetti, Liswi & Weiss 2014:18573). Inadequate knowledge can negatively influence the use of family planning services (Nsubuga, Sekandi, Sempeera & Makumbi 2016:6). In Ethiopia, clients' knowledge of the available family planning methods (OCPs, injectable, implants, IUDs and permanent family planning methods) ranged from 2.6% to 87% and the popular family planning methods were OCPs and injectable (Central Statistics Authority & ICF 2011:93-94). In Nigeria, condoms were the most commonly known family planning method. However, knowing one type of family planning method is not sufficient to make an informed choice to use other methods, such as combined oral contraceptives (OCP), injectable, implants, IUD and permanent contraceptives (Peltzer, Akintade & Pengpid 2011:72).

2.3.10.2 Educational level

People's educational level is one of the main factors that impact on the utilization of family planning services. Clients without formal education are less likely to use modern family planning methods (Eliason et al., 2014:65). For example, in Uganda clients with a tertiary education were 16-20% more likely to use modern family planning methods compared to those with no education (Bbaale & Mpuga 2011:33-34). Educational level influences the health-seeking behaviour of a community and increases clients' self-confidence of clients, enhancing the decision making power to choose and use any kind of modern family planning methods that they want to use (Belay, Mengesha, Woldegebriel & Gelaw 2015:12). The Ethiopian government must improve the education status of women as almost half of women aged between 15-49 (48%) are illiterate in Ethiopia (Central Statistics Authority 2014:21) and can negatively impact on the use of family planning methods (Belay et al., 2015:12).

2.3.10.3 Male involvement

A lack of male involvement is one of the factors that affect the decision to use family planning services (Hussain, Akande, Osagbemi et al., 2013:415-422). In many developing countries, the decision to use family planning methods is influenced by men as they are commonly the breadwinners (Schuler, Rottach & Mukiri 2011:25). In most African countries very few men support their spouses/wives in the decision to use family planning (Aransiola, Akinyemi & Fatusi 2014:869) mainly due to a lack of education as well as cultural and religious reasons (Aransiola et al., 2014: 869). Positive male involvement in family planning has a positive influence on contraceptive prevalence rates, the reduction of unwanted pregnancies and the improvement of maternal and child health (Tilahun, Coene, Temmerman & Degomme 2014:3-8;). When men are involved in the decisions they are more likely to support the use of contraceptives (Shattuck, Kerner, Gilles et al., 2011:1091-92) and also willing to use male family planning methods like condoms (Steinfeld et al., 2013:2-5). Rigorous efforts should be made to improve men's participation in family planning (Shattuck et al., 2011:1091-92)

2.3.10.4 Religious and cultural beliefs

Various cultural and religious beliefs influence the use of health services, including family planning service (Belda, Haile, Melku & Tololu 2017:194) as well as the use of contraceptives (Lebese, Maputle, Ramathuba & Khoza 2013:21-22). Service providers should be familiar with people's cultural and religious beliefs to address these issues during health education sessions and counselling services (WHO 2015g) and also through advocacy with religious and community leaders (Belda et al., 2017:194).

HIV services are mostly offered at family planning facilities. Similar inputs are required and similar challenges might be experienced by service providers and clients, thereby influencing the utilization of HIV services and ultimately an integrated service (Haberlen, Narasimhan, Beres & Kennedy 2017:153).

2.4 HIV/AIDS

The Human Immunodeficiency Virus (HIV) is an RNA (Ribonucleic acid)-containing virus grouped under the *Lentivirus* genus within the family of *Retroviridae*, subfamily *Orthoretrovirina*e that can be transmitted through unprotected sexual intercourse, mother-to-child transmission during pregnancy and breastfeeding, blood transfusion, sharing of contaminated needles and sharp materials. Acquired immunodeficiency syndrome (AIDS) refers to the most advanced stages of HIV infection (WHO 2015c; 2016c). The HIV services available can be preventive, provide treatment or both (Petersen, Myers, Van Hout et al., 2013:13)

2.4.1 HIV services

HIV prevention services include health communication that contributes to behavioural change, condom usage demonstration and distribution, HIV counselling and testing, STI diagnosis and treatment, and referral services (WHO 2012b:10). HIV/AIDS treatment services include co-trimoxazole prophylaxis, anti-retroviral therapy (ART), clinical care of opportunistic infections, and diagnosis and treatment of tuberculosis (TB) (Fujita, Poudel, Green, et al., 2015:176).

The literature review focused on services for HIV counselling and testing (see section 2.4.3), condoms (see section 2.4.6.1) because of their role in HIV prevention and not as a contraceptive per se, ART (see section 2.4.6.2) and behavioural change communication (see section 2.4.10). The other known aspects of HIV services that include co-trimoxazole prophylaxis, clinical care of opportunistic infections and diagnosis and treatment of tuberculosis, nutrition care and support, palliative care at home were beyond the scope of this study. This study was only concerned with the integration of family planning with HIV counselling and testing, ART services and condom use.

2.4.2 Steps of HIV services

The five basic steps of the nursing process, namely nursing assessment, nursing diagnosis, planning, implementation and nursing evaluation (ANA 2015) also apply to providing an HIV service (see section 2.3.2). Like the family planning service, the nursing process begins with nursing assessment in order to identify the potential risk factors, such as a history of risky sexual practices, intravenous/injection drug use, nutritional and mental status (Dehlendorf et al., 2014:659-673). The assessment must also include information to identify the risks for other STIs (Tessema, Mahmood, Gomersall, Assefa et al., 2017:e0179167) and counselling sessions to choose the family planning options and use them (Barden-O'Fallon 2017:57).

The next step, diagnosis, allows service providers to do a physical examination, such as measure the blood pressure and weight (Hakans 2012:54) as well as basic laboratory screening, such as full blood count, CD4 cell count, creatinine clearance, micro-albuminuria measurement, urine dipstick, hepatitis B antigen test, liver function test and an HIV plasma viral load (Venter, Majam, Akpomiemie et al., 2017:445).

The next step is planning (Abdelkader & Othman 2017:76-82). Service providers must develop a plan to provide assistance for HIV clients, which may include initiating ART treatment, improve nutritional status, increase socialization, and reduce stigma and discrimination (Apanga, Akparibo & Awoonor-Williams 2015:23).

The next step is the implementation phase, in which service providers care for HIV clients to meet the needs of their nursing plan (Yoost & Crawford 2016:118) and the final step is evaluation, which focuses on the assessment to evaluate the outcome of the care given as needed by the client (Steinfeld et al., 2013:2-5).

HIV counselling and testing service is one of the most common HIV preventive services available and provided at the public health centre level (Petersen et al., 2013:13) by applying the steps of the nursing process.

2.4.3 HIV counselling and testing service

Counselling refers to the communication between clients and service providers to solve individual's or groups' personal, social, or mental problems (UNAIDS 2011:9). According to the WHO (2014c:50), HIV testing and counselling (HTC) is the essential first step in enabling people with HIV to know their status and obtain HIV prevention, treatment and care services. HIV testing can be voluntary (UNAIDS 2011:7) or initiated by service providers (providers initiate HIV testing and counselling) which is offered routinely in health facility settings (WHO 2014c:51). A lack of awareness, educational level and stigma and discrimination are among the factors that affect the utilization of voluntary HIV counselling and testing (Apanga et al., 2015:23). Awareness of the availability of HIV treatment can be a positive determinant for HIV testing (Alkaiyat et al., 2014: 18573). In Ethiopia, HIV testing service coverage for women was 86% and 82% for men in 2011 (Central Statistics Authority & ICF International 2011:231). Women have a higher HIV prevalence (1.9%) than men (1%) although pregnant women were less likely to be HIV positive than other women (Central Statistics Authority & ICF International 2011:231).

Desclaux, Ky-Zerbo, Somé & Obermeyer (2014:27) found poor quality of HIV counselling and testing services in terms of confidentiality and consent because of unethical practices by service providers. The services were given during campaigns in Burkina Faso which had negative implications for social norms related to HIV, such as positive living.

2.4.4 Input 1: Geographic accessibility to HIV services

Globally, an estimated 34 million people are living with HIV/AIDS and 8 million people are on antiretroviral therapy. In 2012, 23.5 million people in sub-Saharan countries were living with HIV/AIDS. Of these, 5.6 million lived in South Africa and 970,000 in Ethiopia (UNAIDS 2012:6-7).

Globally, efforts were made to reduce new HIV infections among adults and adolescents by 50% between 2001 and 2012, including in Ethiopia (UNAIDS 2013:1). Ethiopia made a 50% reduction through improving access to quality HIV-preventive services, treatment, and care and support to clients with particular emphasis on most-

at-risk populations (HIV/AIDS Prevention and Control Office 2014:15-17). Currently 722,248 HIV-positive people in Ethiopia need HIV services (Ethiopian Public Health Institute 2017:2).

The most-at-risk groups of the population include sex workers, people who inject drugs, men who have sex with men, and transgender individuals (WHO 2014f). The Ethiopian HIV Prevention and Control Office (2014:15-17) categorized five population groups as the most at risk groups, namely sex workers, mobile workers, in-school youth, uniformed services and prison inmates. In 2012, there was insufficient data on the HIV prevalence among men who have sex with men in Ethiopia (United States of American President's Emergency Plan for AIDS Relief [PEPFAR] 2012:3).

In 2011, an estimated 9.45 million people in Ethiopia had received HIV counselling and testing (PEPFAR 2012:4) and the number increased to 8,485,379 in 2016 (MOH Ethiopia 2017). An estimated 247,805 HIV-positive people had started ART in 2011 (PEPFAR 2012:4) and increased to 393,609 in 2016 (MOH Ethiopia 2017)

As in the case of family planning services, geographic distance and transport availability are factors that affect HIV service utilization (see section 2.3.3) while knowledge about HIV positively impact on the utilization of HIV care services (Shangase & Egbe 2015: 20-26). Sanga, Kapanda, Msuya and Mwangi (2015:452) found that clients with a good knowledge of HIV were more likely to utilize HIV counselling and testing services. Sanga et al. (2015:452) add that educational level also contributed to the utilization of HIV services. Clients in urban areas had better access to comprehensive HIV care services compared to rural areas because people in the urban areas had better access to social media and information on HIV than those in rural areas (Lubogo, Ddamulira, Tweheyo & Wamani 2015:162). Most of the factors that affect the utilization of HIV services also contribute to family planning service utilization (see section 2.3.10)

Another factor influencing access to HIV services is fear of stigma and discrimination which affects the daily life of HIV-positive people. They may receive poor health care in the health sector and lose hope and feel worthless (AVERTing HIV and AIDS 2016). The Human Sciences Research Council (HSRC 2015:18) found that persons living with HIV believed they were stigmatized by other people because they themselves felt ashamed (29%), had guilt feelings (28%), blamed themselves (31%) and had low self-

esteem (22%). Communication and behaviour change are needed to address stigma and discrimination as well as other barriers (see section 2.4.10).

2.4.5 Input 2: Human resources

The available human resources for family planning services and HIV services are similar (see section 2.3.4). In order to provide universal health coverage, such as family planning and HIV services, it is essential to strengthen the health workforce (WHO 2015f). A shortage of service providers (nurses and physicians) is one of the factors responsible for the weak response to the HIV epidemic in sub-Saharan Africa (CDC 2015). Adequate trained service providers (nurses and physicians) who primarily deliver high quality HIV service to clients is essential to achieve the goal of an AIDS-free generation (WHO 2015c).

The service providers responsible for offering different types of HIV services vary from country to country. In most countries nurses, health officers, and physicians offer comprehensive HIV care services, including HIV counselling and testing, ART, prevention of mother-to-child transmission as well as health education at the health facilities (WHO 2015d; 2015c; 2015f). In an effort to solve the existing shortage of human resources, many countries utilise nurses with adequate training to provide HIV services in the absence of physicians (Mwangala, Moland, Nkamba et al., 2015:1).

The same nurses, midwives, health officers and physicians responsible for providing family planning services also provide HIV services therefore the ratios, training and utilization of service providers described in sections 2.3.4.1, 2.3.4.2 and 2.3.4.3 are applicable. To join resources, thus providing an integrated service might be beneficial as the current resources can be utilized effectively (see section 2.5.3).

2.4.6 Input 3: Medical resources

Different kinds of medical equipment and supplies are required to offer quality HIV services at facility level; improving the supply chain system and making all the required medical equipment and supplies available can optimize the utilization of HIV services (WHO 2015b). In the context of this study, medical resources are condoms, ART and HIV test kits necessary to deliver HIV services at facility level. Medical resources are the

key inputs in the delivery of HIV services by service providers at the public health centre level.

2.4.6.1 Condoms

A condom is a sheath or rubber that is worn over the genital organ during sexual intercourse to prevent HIV and other STIs as well as pregnancy (Linton & Kiley 2017). There are two types of condoms: male and female condoms. Male condoms can be used as dual protection for family planning and to reduce HIV transmission, but the use for dual protection was only 3.8% in Zimbabwe (Mutowo, Kasu & Mufunda 2014:300). The male condom is widely available in most countries, including Ethiopia. However; in Ethiopia the utilization rate is low (below 50%) (HIV/AIDS Prevention and Control Office 2011:20). The reasons given for the low utilization are the desire for children, low awareness, reduction of sexual pleasure, partner preference and individuals' educational level (Salaudeen, Musa, Ojotule et al., 2014:99-103). Male involvement and cultural barriers have also had a negative impact the utilization of condoms (Kassa, Abajobir & Gedefaw 2014:1). Obembe, Adebowale and Odebunmi (2017:398) point out that the female condom can also prevent HIV and other STIs as well as pregnancy. Utilization of female condoms is low in Ethiopia and other developing countries, however because of low awareness, male partner objection or minimal male partner support, and a lack of access to counselling and female condom services (Moore, Beksinska, Rumphs et al., 2015:125-142).

2.4.6.2 Anti-retroviral therapy or treatment (ART) and HIV test kits

Antiretroviral therapy or treatment refers to a triple or more, antiretroviral drug combination used for the treatment of HIV patients (UNAIDS 2011:7). The WHO (2014:29) recommends that all individuals with severe or advanced HIV clinical disease (WHO stage 3 and 4) and individuals with a CD4 count of ≤350 cells/mm3 should start ART as early as possible without delay. In Ethiopia, HIV-positive people with CD4 count of ≤500 cells/mm3 must be started on ART, irrespective of WHO clinical stage; WHO clinical stage 3 and 4 should be started on ART, irrespective of CD4 cell count ,and HIV infection and active TB disease, pregnant women, breastfeeding mothers and sero-discordant couples should be started on ART, irrespective of CD4 cell count (MOH Ethiopia 2014d:36)

Stock shortages of ART/HIV test kits needed for the provision of HIV service is one of the programmatic factors that affect the utilization of HIV service at facility level (Nyogea, Said, Mwaigomole et al., 2015:1.). In Ethiopia, 73.7% of the public health centres and 75% of the hospitals had a problem with ART drugs that were out of stock, while 63% of the public health centres were out of stock of one or more types of HIV test kits in Addis Ababa, Ethiopia (Berhanemeskel, Beedemariam & Fenta 2016:11). Ensuring consistent availability of ART and ART/HIV test kits enhances the utilization of HIV services (Berhanemeskel et al., 2016:11). The supply management system should ensure the right supplier, the right product, the right quantity, the right quality, right time and right place (WHO 2015b:10).

2.4.7 Input 4: Fiscal resources

Fiscal resource is one of the inputs required to improve access to comprehensive HIV services as well as family planning services (see section 2.3.6). Globally, funding was mobilized to respond to the HIV pandemic in low- and middle-income countries. An estimated US $19.2 billion was made available by donors and accounted for the majority of global HIV funding to support HIV programmes in low- and middle-income countries in 2014 (AVERTing HIV and AIDS 2016). Globally, the domestic funds for HIV programmes accounted for 57% (that is US $19.6 billion) while the external funds sourced from donor governments and multilateral organizations accounted for 43% (AVERTing HIV and AIDS 2016). Despite domestic funds, many low- and middle-income countries remain dependent on international donors to finance their HIV programmes. For example, 44 countries had 75% or more of their HIV financing needs provided by external sources (AVERTing HIV and AIDS 2016). In Ethiopia, the expenditure for HIV/AIDs was 19% and most of the funds (83%) came from donors (MOH Ethiopia 2014d:13). See section 2.3.6 for the overall health expenditure of Ethiopia.

2.4.8 Input 5: Infrastructure

The same infrastructure is required for family planning services and HIV services as all are part of health service delivery (see section 2.3.7 for details).

2.4.9 Input 6 process: Policies, strategies and guidelines

Policies, strategies and guidelines are not only inputs but also include a process or activities to identify HIV-related policies in place, strategies implemented and guidelines used in this study (see figure 2.1). The global community including governmental and non-governmental organizations (NGOs) responded to the HIV pandemic ten years after the first case was identified in 1981 (PEPFAR 2015). In 1996, the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the global fund was established to coordinate the global HIV programme and develop global policies, strategies and guidelines. In 2003, the US government funding mechanism, namely the U.S President's Emergency Plan for AIDS Relief (PEPFAR) was established to support the HIV programme (PEPFAR 2015).

Policies, strategies and guidelines influence access to HIV service and the utilization thereof, particularly in countries where there is a generalized epidemic of HIV. Policies, strategies and guidelines on HIV help to ensure the maximum effectiveness and sustainability of comprehensive HIV services (WHO 2014c: 21).

The Ethiopian Ministry of Health is responsible for developing policies, strategies and guidelines on HIV service delivery and improve HIV services. To date the following initiatives have been developed: the National prevention of mother-to-child transmission strategy; HIV policy; Strategic Plan II for intensifying Multi-sectoral HIV and AIDS response in Ethiopia; National HIV counselling and testing guidelines and National guidelines for comprehensive HIV prevention, care and treatment (MOH Ethiopia 2016).

The combination of behavioural change communication, biomedical and structural HIV prevention is one of the most popular and effective mixed strategies to reduce the infectiousness of HIV-positive persons with strategies that reduce HIV susceptibility of healthy individuals from HIV transmission (MOH Ethiopia 2014d:23). The combination HIV prevention strategies include three types of mutually reinforcing interventions

namely, behavioural change communication, biomedical and structural HIV prevention actions and tactics to reduce the HIV transmission (HIV/AIDS Prevention and Control Office 2014:15-17). The combination of prevention strategies did not describe the integration of family planning and HIV services and therefore a strategic plan to facilitate the implementation of an integrated family planning and HIV service at the public health centre level that can contribute to better access to family planning and HIV services. With these combination strategies, human resources, medical resources and health education materials can be shared at the integrated health care services (Longpré & Dubois 2015:84).

2.4.10 Input 7: Behavioural change and communication for the use of HIV services

As in the case of family planning services, behavioural change communication on HIV services is an input. Effective health education interventions and activities can impact on behavioural change for the use of HIV services, such as the HIV treatment continuum in low- and medium-income countries (Babalola, Van Lith, Mallalieu et al., 2017:S5-S14). Tailored health education intervention programmes are needed to improve condom use and HIV counselling and testing of all at-risk groups in a population (Yi, Tuot, Chhoun et al., 2016:599). Communication and behavioural change are important to reduce social stigma and discrimination and to enhance the utilization of HIV services (AVERTing HIV and AIDS 2016).

Given the similarities as well as the differences in family planning and HIV services, the integration of these services can be beneficial to integrated health care services (Haberlen et al., 2017:153).

2.5 INTEGRATION OF HEALTH CARE SERVICES

Integrated health care services are a new paradigm of the health system that integrates discrete vertical interventions into a comprehensive delivery system at the public health centre level that the majority of the population can easily access (Vasan, Ellner, Lawn et al., 2014:6), promote health care coordination and contribute to the full integration of the health care system (Wang, Birch, Zhu et al., 2016:571). It can be useful for clients as well as service providers and improve the overall health system (WHO 2015h:12). It can

enhance the health outcomes such as a reduction in mortality and morbidity (Davies, Goodma, Bunn et al., 2011:320).

Integrated health services refer to different kinds of health services delivered to ensure that the people receive appropriate health care according to their needs (Johnson et al., 2012:03). These services include continuous health promotion, disease prevention, diagnosis, treatment, disease management, rehabilitation and palliative care services in an integrated manner within the health system to progress towards universal health coverage (WHO 2015c). The integration of family planning and HIV services is one of the approaches that can strengthen the health system (Gay et al., 2011:56) and resolve ongoing problems of accessibility (see section 2.5.1), shortages of health workers (see section 2.5.2) and weak supply chains (Daff, Seck, Belkhayat & Sutton 2014:245-252:16).

HIV services such as HIV counselling and testing, antiretroviral therapy (ART) services and reproductive health services (comprehensive abortion care, antenatal, delivery care, postpartum care screening for reproductive organ cancers) should be provided together with family planning services in an integrated manner (MOH Ethiopia 2011:26). Child health care services such as immunization and nutrition services can be provided along with family planning services (Dulli, Eichleay, Rademacher et al., 2016:73-86).

The key inputs or process/activities indicated in family planning and HIV services (geographic accessibility, human resources, fiscal resources, medical resources, infrastructure, policies, strategies and guidelines available and behavioural change and communication for the use of family planning and HIV services) are similar and should apply to the integrated health care services.

2.5.1 Input 1: Geographic accessibility

Geographic distance affects the accessibility of integrated health care services. However, if the integrated service is available at the nearest facility to a client, it will be utilized (Dos Anjos Luis & Cabral 2016:173). It is essential to improve access to the integrated services, one-stop service, for clients (WHO 2015h:12) because it enhance positive health outcomes such as a reduction of mortality and morbidity (Davies et al.,

2011:320). The inputs for geographic accessibility to family planning and HIV services also apply to integrated health care services (see section 2.3.3 and 2.4.4).

2.5.2 Input 2: Human resources

An inadequate number of service providers has a negative influence on the utilization of integrated health care services (Cooper, Mantell, Moodley & Mall 2015:217). The limited number of service providers in most developing countries contributes to service providers' dissatisfaction as they have to provide more than one services at a time without receiving any additional incentives (Meena, Rhodes and Wylie 2014:132). Moreover, they already have a high workload or may not competent in both services (Uebel, Guise, Georgeu et al., 2013:171. In-service training in integrated health care services is not always provided to fully implement the integrated health care services (Stein 2016:9). The human resources for family planning and HIV services also apply to the integrated health service (see sections 2.3.4 and 2.4.5).

Sun, Lin, Zhao et al. (2017:668) found that inadequate numbers of service providers contribute to clients' long waiting times and negatively impact on the utilization of integrated health care services. It is essential to reduce the client waiting time at any health facility. This should be managed through continuous capacity building of service providers and close follow-up of leadership and management (Meena et al., 2014:132).

Providing training for service providers plays a vital role in the success of an integrated health care service (Nicholson, Jackson & Marley 2014:6). The training is an opportunity to enhance service providers' skills in the provision of integrated health care services (Mutemwa, Mayhew, Colombini et al., 2013:18). Training therefore helps service providers to be knowledgeable and competent, which also leads to job satisfaction (Mutemwa et al., 2013:18). However, a lack of adequate funding is the major limitation to building the capacity of service providers for the implementation of an effective and sustainable integrated health care service at health facility level (Vasan et al., 2014:6). Advocacy is required to mobilize adequate funding (Vasan et al., 2014:6) to organize and provide training for service providers to prepare them to offer quality integrated health care services (Mwaniki, Vaid, Chome et al., 2014:416).

2.5.3 Input 3: Medical resources

Shortages of medical resources, such as medical equipment and supplies that are out of stock, have a negative impact on integrated health services including integrated family planning and HIV services (An, George, LeFevre et al., 2015:451) (see sections 2.3.6 and 2.4.7).

2.5.4 Input 4: Fiscal resources

A lack of adequate funding has a negative influence on the improvement of the integrated health services and requires attention by decision makers to facilitate the integrated health services (WHO 2012a).

The provision of health care services such as family planning and HIV services in an integrated manner is cost-effective as existing fiscal resources, infrastructure and human resources can be utilized (Shade, Kevany, Onono et al., 2013:S87–S92). Mwaniki et al. (2014:416) state that the integration of health care services can be implemented in resource-limited countries such as Ethiopia. However, financial sustainability is required to ensure the availability of integrated health care services without interruption at public health centre level (Liaropoulos & Goranitis 2015:80). Integrated health care services enables service providers and programme officers to identify and prioritize the different health care services so that fiscal resources can be allocated to meet clients' needs in a cost-effective manner at health facility level (Banfield, Jowsey, Parkinson et al., 2017:2).

2.5.5 Input 5: Infrastructure

Inadequate infrastructure affects the integration of family planning and HIV services (Irani et al., 2015:8). The infrastructure required for family planning and HIV services applies to integrated health services.

2.5.6 Input 6 process: Policies, strategies and guidelines

Policies strategies and guidelines are both inputs and process in this study (see section 2.3.8 and 2.4.9). A lack of guidelines negatively affects the implementation of integrated

health services, such as integrated family planning and HIV services (Lyatuu 2012:15). Consequently, it is necessary to develop guidelines to ensure the implementation of integrated health services at public health facility level (Vasan et al., 2014:6). This, in turn, contributes to client satisfaction as well as health care service safety (Mosadeghrad 2014:80). The available policies, strategies and guidelines for family planning and HIV services did not address integrated health care services with particular emphasis with integrated family planning and HIV services (see sections 2.3.8 and 2.4.9)

2.5.7 Behavioural change and communication for the use of integrated family planning and HIV services

The inputs for behavioural change and communication in family planning and HIV services also apply to integrated health care services (see section 2.3.9 and 2.4.10).

2.5.8 Advantages and disadvantage of integrated health care services

The integration of health services has the following advantages and disadvantages.

2.5.8.1 Advantages of integrated health care services

The integration of health care services has a positive impact on the quality of services when an integrated health care service approach is delivered by competent service providers at a single point-of-care, using a standard protocol of counselling to offer health care services for each client (Vasan et al., 2014:6).

Integrated health care services can significantly reduce unnecessary frequent visits to health care facilities as clients receive two or more health care services in a “one-stop’’ approach, saving time as well as costs for clients who have to travel to a facility (Di Pollina, Guessous, Petoud et al., 2017: 53). The provision of integrated health services in “one-stop’’ therefore satisfies the clients’ needs at the public health facilities (Di Pollina et al., 2017:53) and ensures achievement of universal health coverage (WHO 2015h:12).

Provision of integrated health care services can create better coordination of services across different care settings if supporting policies/guidelines are in place and service providers are competent and motivated (Wang et al., 2016:571). In addition, well-coordinated integrated health services will shorten the timeliness of referrals and enhance team building amongst service providers for better health outcome as there will be fast communication/interaction between the different units (WHO 2015h:12). Establishing referral systems within the health facility and coordination among the different health care units is an important strategy for successful implementation of integrated health care services as it helps to provide complete health care services for clients as needed (Acharya, Tenpa, Thapa et al., 2016).

2.5.8.2 Disadvantages of integrated health services

Meena et al. (2014:132) found that one of the disadvantages of an integrated health service is the difficulty in prioritizing and monitoring the various health programmes offered in an integrated way. In order to monitor the health programmes, there must be defined objectives and targets to evaluate the outcome or impact of each programme; the programme officers should identify which services could be integrated and how the services will be integrated (Meena et al., 2014:132). In this study, the integration refers to family planning and HIV service integration (see chapter 1, section 1.6).

Furthermore, the integration of health care services might not be easily implemented specifically at health facility level as the objectives of integration vary depending on the type of health services offered to clients in a “one-stop” setting (Vasan et al., 2014:6) and a lack of common understanding on the integrated health care services by service providers at public health centre level (Reynolds & Sutherland 2013:168). For the effective implementation of any integrated service, identifying the actions to be implemented, the role and responsibilities of every stakeholder as well as the timeliness for the implementation should be specified and agreed on (Reynolds et al., 2013:168).
In this study, it refers to an integrated family planning and HIV services.

Family planning services and HIV services have a lot in common in regard to the inputs required for utilization. Similar inputs are needed for an integrated health service. An integrated health service might benefit if all inputs (geographic accessibility, human resources, fiscal resources, medical resources, infrastructure, policies, strategies and

guidelines available and behavioural change and communication for the use of integrated health services) can be utilized in a structured and planned manner to optimally use all the inputs available.

2.6 SUMMARY

This chapter discussed the literature review conducted for the study. The literature review contributed the development of the data-collection instruments in phase 1 (see Annexures 1 and 2). Chapter 3 describes the research methodology of phase 1.

CHAPTER THREE

PHASE 1 RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

This chapter describes the research design and methodology used in phase 1 of the study. The aim of the study was to develop a strategic plan that could facilitate the implementation of an integrated family planning and HIV services at public health centre level in Addis Ababa, Ethiopia.

In order to achieve the aim, the objectives of the study were to:

- Describe the challenges and opportunities of clients using integrated family planning and HIV services in public health centres in Addis Ababa, Ethiopia.
- Describe the challenges and opportunities of service providers regarding integrated family planning and HIV services in public health centres in Addis Ababa, Ethiopia.
- Identify strategies that could facilitate the implementation of an integrated family planning and HIV services at the public health centre level.
- Develop a strategic plan that could facilitate the implementation of an integrated family planning and HIV services at the public health centre level in Addis Ababa.

The researcher selected an exploratory sequential mixed-method research design in this study. The researcher used quantitative and qualitative research methods (Hesse-Biber 2010:3). Quantitative data were obtained from clients and service providers (phase 1) and provided the scientific evidence to share with stakeholders, namely programme officers. This data and the literature review formed the basis for identifying and voting on strategies qualitatively (see chapter 5), by means of a nominal group discussion (phase 2), and the development of the strategic plan (see chapter 7, section 7.2.3).

3.2 RESEARCH DESIGN

Figure 3.1 illustrates the exploratory sequential mixed-method research design.

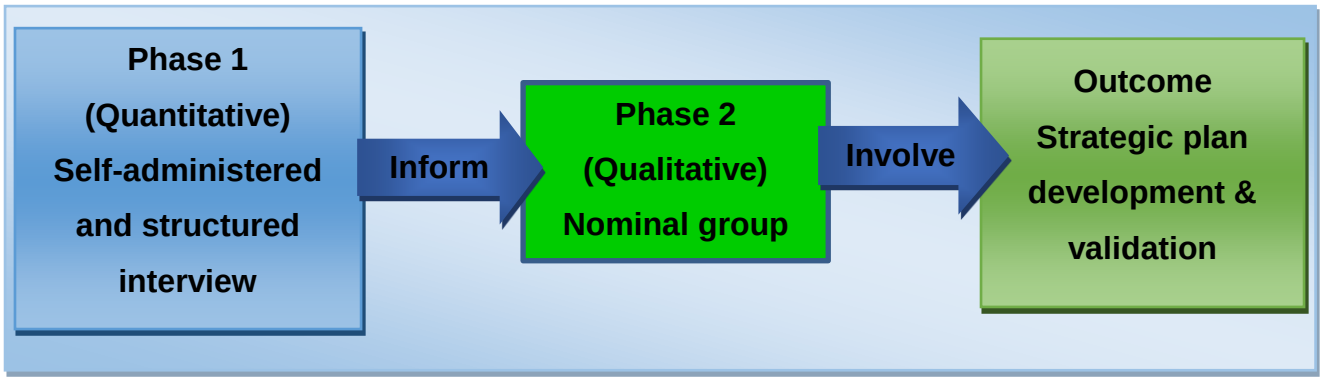

Figure 3.1 Exploratory sequential mixed-method research design

An exploratory sequential mixed-method design with quantitative data collection was used in the first phase followed by qualitative data collection in the second phase. The quantitative data informed the qualitative data collection in phase 2 (see chapters 5 & 6). The researcher used quantitative and qualitative research methods (Hesse-Biber 2010:3). This chapter describes the methodology of phase 1.

3.3 OBJECTIVES OF PHASE 1

The objectives of phase 1 were to describe

- The challenges of clients using integrated family planning and HIV services in public health centres in Addis Ababa, Ethiopia.
- The opportunities of clients using integrated family planning and HIV services in public health centres in Addis Ababa, Ethiopia.
- The challenges of service providers' regarding integrated family planning and HIV services in public health centres in Addis Ababa, Ethiopia.
- The opportunities of service providers' regarding integrated family planning and HIV services in public health centres in Addis Ababa, Ethiopia.

3.4 RESEARCH PROCESS

Figure 3.2 illustrates the research process.

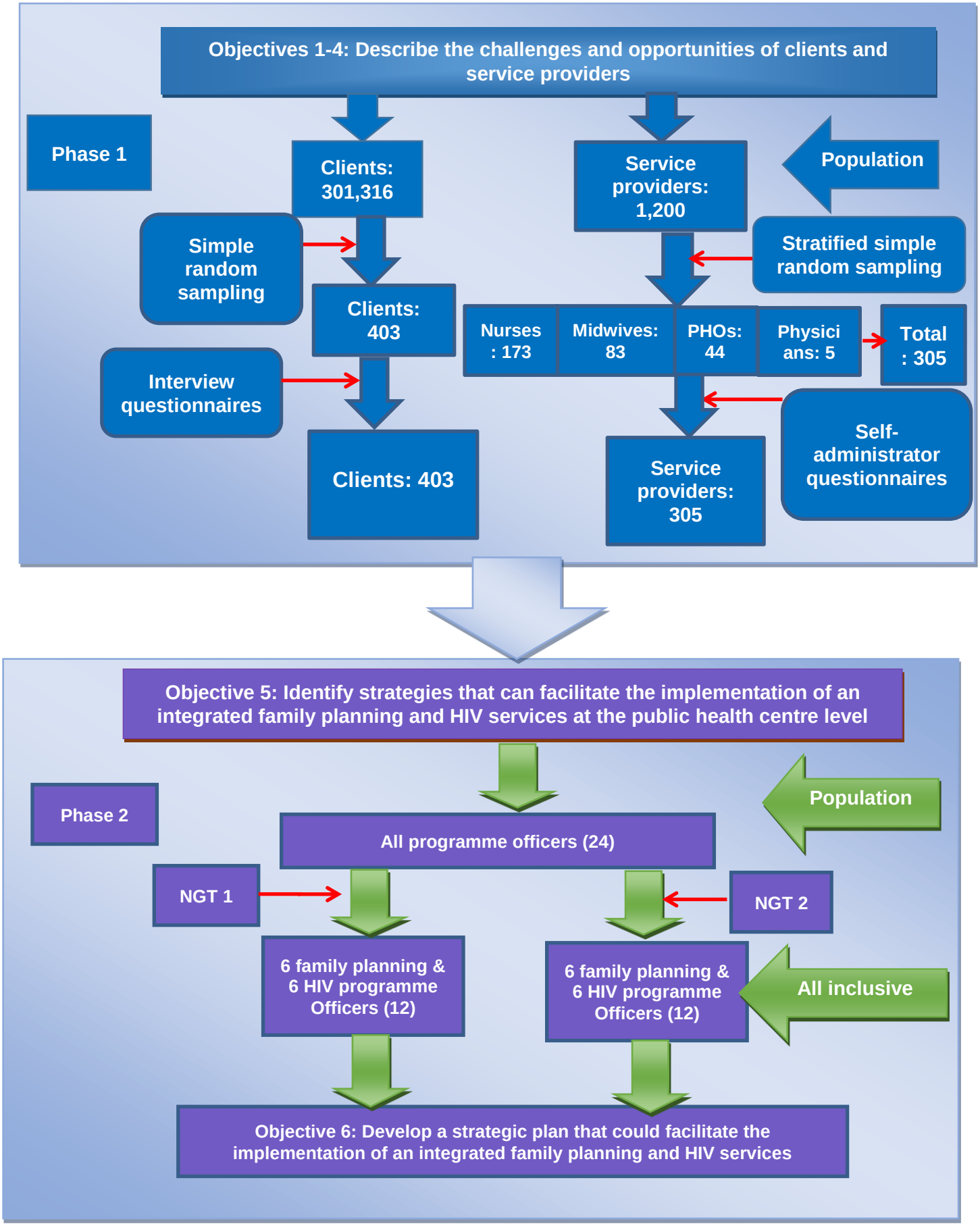

Figure 3.2 Research process

3.5 POPULATION

A research population refers to the entire set of elements, individuals or objects having some common characteristics in which a researcher is interested (Polit & Beck 2014:274). The population of phase 1 was clients who had access to family planning and HIV services as well as service providers who rendered the care at the public health centre. Addis Ababa has a total of 80 public health centres that serve a population of approximately 3 million (Addis Ababa City Administration Health Bureau 2014:10).

Public health centres: The 80 public health centres in Addis Ababa serve approximately 690, 000 clients in the reproductive age group (18-49 years).

Clients: Approximately 301,316 clients utilised the family planning and HIV services in the public health centres in 2014. Of these, 225,987 used HIV services and 75,329 clients used family planning services (Addis Ababa City Administration Health Bureau 2014:12).

Service providers: A total of 1,200 service providers (680 nurses, 296 midwives, 200 health officers and 24 physicians) were responsible for family planning and HIV services in the 80 public health centres in Addis Ababa (Addis Ababa City Administration Health Bureau 2014:12).

3.6 SAMPLING

Sampling is a process of selecting cases to represent the entire population so that inferences about the population can be made (Creswell 2014:142-143). The researcher used probability sampling because it allows an equal chance of selection. In probability sampling, the study subjects selected are representative of a certain population that allows equal chance of selection (Creswell 2014:142-143). This sampling method allowed the researcher to randomly select the samples of public health centres using a lottery method, clients by simple random sampling (SRS), and service providers by stratified simple random sampling.

Public health centres: Thirty-one (31) of the 80 public health centres were randomly selected, using a lottery method. Only 31 public health centres were selected due to limited resources available for the study. However, these public health centres were representative of public health centres in Addis Ababa as they were all public health centres that provide similar services to all clients and fall under the same level of function.

Clients: Four hundred and three (403) clients were selected from the 31 public health centres using simple random sampling (SRS). Simple random sampling (SRS) is the process of random selection of samples from a defined population (Loiselle, Profetto-McGrath, Polit & Beck 2011:212). The required sample size was determined by using single population proportion formula (LoBiondo-Wood & Haber 2010:230). The application of 50% proportion is assumed to yield a maximum sample size calculation (Naing, Winn & Rusli 2006:11). Accordingly, the researcher applied P=50%, 95% confidence interval, margin of error = 5%, and non-respondent rate = 5 %.

The formula used to calculate the sample size was

$$n = \frac{Z2 * P (1-P)}{w2} = \frac{3.84*0.5 (1-0.5)}{0 .05^2} = 384$$

The target populations of clients were 116,760, that is greater than 10,000 populations and was calculated as 384 without adjustment. Considering the non-response rate of 5% (19.2) clients, the actual sample size was 384+19 = **403** clients. The researcher utilized a proportional allocation to each public health centre to draw the 403 service providers depending on the client flow of each centre (see table 3.1). The researcher listed all clients who had appointments for family planning and HIV services between 15 and 26 June, 2015 and 2,687 clients were appointed to get family planning and HIV services from the registers. Thus, every seventh (7th) client was selected and asked to volunteer to participate (see table 3.1).

Service providers: Stratified simple random sampling was used to determine the sample size of each group of service providers. Fifty percent (50%) of each group of service providers (nurses, midwives, public health officers and physicians) were randomly selected (see table 3.1). A total of three hundred and five (305) service

providers (173 nurses, 83 midwifery nurses, 44 public health officers and 5 physicians) were selected from the 31 public health centres, using stratified simple random sampling (SRS).

The required sample size was determined by using a single population proportion formula (LoBiondo-Wood & Haber 2010:230). To yield a maximum sample size calculation, the researcher applied P=50%, 95% confidence interval, margin of error = 5%, and non-respondents rate = 5% (Naing et al., 2006:11).

The formula used to calculate the sample size was

$$n = \frac{Z2 * P (1-P)}{w2} = \frac{3.84*0.5 (1-0.5)}{0.05^2} = 384$$

The population of service providers who provide family planning and HIV services in the 80 public health centres was <10,000 population; that is, 1,200. To get the required sample, it was adjusted with a formula of n/1+ (n/N) = 290. Considering the non-response rate of 5% (14.5), the actual sample size was 290+15 = **305** service providers.

The researcher used a 50% proportional allocation to each group of service providers at the public health centres to draw the 305 from among the 610 service providers. Every second service provider from each group was asked to participate in the study.

The distribution of the sampled service providers was

Nurses: 346/610*305=173
Midwives: 166/610*305=83
Public health officers=88/610*305=44
Physicians=10/610*305=5

Table 3.1 summarises the sample of public health centres, service providers and clients.

Table 3.1 Sample of clients and service providers at each public health centre

SN	Name of Public Health Centre	Clients		Service providers	
		Population	Sample	Population	Sample
1	Addis Hiwot	47	7	14	7
2	Addis Ketema	60	9	16	8
3	Addisugebyia	40	6	28	14
4	Afincho ber	33	5	18	9
5	Amoraw	27	4	20	10
6	Arada	67	10	24	12
7	Bole 17	100	15	16	8
8	Dilfire	107	16	14	7
9	Entoto	100	15	18	9
10	Felege Meles	47	7	24	12
11	Gotera	67	10	20	10
12	Hidase	73	11	22	11
13	Janmeda	73	11	20	10
14	Kazanchis	147	22	20	10
15	Kirkos	153	23	22	11
16	Kolfie	67	10	22	11
17	Kotebe	173	26	16	8
18	Meri	73	11	26	7
19	Meshualkia	160	24	26	13
20	Miyichew	53	8	20	10
21	Ras Emiru	73	11	20	10
22	Selam	153	23	16	8
23	Semen	67	10	22	11
24	Shegole	93	14	16	8
25	Shiromeda	127	19	22	11
26	Summit	93	14	20	10
27	Woreda 1	80	12	18	9
28	Woreda 3	60	9	16	8
29	Woreda 5	80	12	20	10
30	Woreda 9	140	21	16	8
31	Yeka	53	8	30	15
	Total	**2,687**	**403**	**610**	**305**

3.7 DATA-COLLECTION INSTRUMENT

Data was collected by means of questionnaires. The researcher developed the questionnaires for data collection based on the literature review. A self-administered questionnaire was developed to collect data from service providers between 1 and 12 June 2015 (see Annexure 2 for questionnaire). A questionnaire was also developed for structured interviews to collect data from clients between 15 and 26 June 2015 (see

Annexure 1). The questionnaires were completed by trained data collectors in the interviews. This method was decided on due to the literacy level of some respondents who would not have been able to complete the questionnaire themselves.

The researcher consulted experts in the field to review the content of the draft questionnaires. One was an expert in questionnaire development and the research topic and the other was a statistician. Both experts accepted the content and structure of the questionnaire.

3.8 PRE-TESTING

The researcher conducted a pre-test or pilot study to test the questionnaire for clarity of the questions to improve the reliability of the study (Delport & Roestenburg 2011:195). The researcher conducted pre-testing at two public health centres in non-study areas, close to Addis Ababa. Ten (10) randomly selected service providers who were working in family planning and HIV services and 10 clients who came for family planning and/or HIV services were asked to voluntarily participate in the pre-test. They all received the information sheet and consent form (see Annexures 3 and 4) to ensure voluntary participation and informed consent. The researcher revised the questionnaires according to the feedback from the experts, service providers and clients so that the wording, content and context of some questions were clear. The following changes were made to the questionnaires:

- The following six questions were not clear to all the clients:
  - Section A: Q3 What is your occupation? “Civil servant’’ was not on the list of choices/options and was therefore added.
  - Section A: Q7 How much is the total monthly income of your family? Clients understood this question on monthly income as referring to only the client’s income and not the combined income of all in the household. The local language words were elaborated on to provide clarity in the local context.
  - Section B: Q27 Do you think that any of the following aspects are challenges to the use of family planning or contraceptive methods? The statement “I did not observe any challenges’’ was added as an option.
  - Section C: Q3 What was the result of your HIV test? The statement ‘’I do not want to disclose’’ was added.

    - Section C: Q6 What kind of HIV service(s) have you received from this health facility today? The statement “I did not receive any HIV services today’’ was added.
    - Section D: Q1 Have you received an integrated family planning and HIV service today? Some clients understood this to mean only integrated family planning and HIV services through a “one-stop shop’’ approach. This was corrected and elaborated to include integrated family planning and HIV service provision using other approaches.
- Some clients complained about the length of the questionnaire. Data collectors explained the purpose of the study and that it would only take 20 minutes to complete the questionnaire. Clients then volunteered to participate in the study and signed written consent.
- Some service providers did not answer all the questions because they were engaged in service provision, although they were asked to complete it in their free time. The supervisors again encouraged the service providers to complete the questionnaires in their coffee break or lunch break. The questionnaires were also collected in their break time to ensure that the work schedule was not unethically interrupted.
- Some service providers did not follow the instructions to skip questions that were not relevant to them. This was discussed with the data collectors during the training and they explained to the service providers that they should read all the instructions and encouraged them to ask questions if they had any uncertainty.
- Some service providers expected payment for their participation. However, the researcher emphasized that participation was 100% voluntary and no incentives would be paid. They were informed that they had the choice not to participate, without any penalty and all the service providers agreed to voluntarily participate in the study.

The questionnaires were initially prepared in English and translated into the local language (Amharic). The local language was again translated back to English to make sure that each question had the same meaning in both languages. The final questionnaires for clients and service providers had a consent form attached to each questionnaire (see Annexures 1 and 2).

Each respondent signed the consent form after they read through the information letter and understood the purpose of study as well as that their participation was entirely voluntary. Data collectors read the information sheet and consent form to the illiterate clients to ensure they understood and voluntarily participate. They were informed that they can withdraw any time if they want to do so and the information they provided could be kept anonymous and confidential at all times.

The two final questionnaires (for clients and service providers) had four sections (see Annexures 1 and 2).

- Section 1: Biographical information
- Section 2: Fertility and family planning
- Section 3: HIV/AIDS services
- Section 4: Integration of family planning and HIV services

The self-administered questionnaire (for service providers) consisted of 86 questions and the questionnaire used for the structured interview (for clients) consisted of 61 questions. Both questionnaires included statements and dichotomous/multi-chotomous questions. The most response categories for the dichotomous questions were 'Yes/No' and 'Agree/Disagree'. There were also questions where a justification was required, following the dichotomous or multi-chotomous questions and statements to know the reasons why the respondents chose specific answers/options. Both questionnaires were used to provide a quantitative or numeric description of the sample and contained qualitative questions for qualitative enhancement.

3.9 VALIDITY AND RELIABILITY

The quality of research is determined by its validity and reliability.

3.9.1 Validity

Validity is the degree to which an instrument measures what it is supposed to measure (Polit & Beck 2014:194). Validity refers to the extent to which an empirical measure adequately reflects the real meaning of the phenomenon under consideration (De Vos et al., 2011:172). There are various types of validity such as face, content, criterion-

related and construct validity. In this study the questionnaires were only tested for content and face validity (Polit & Beck 2014:198).

Content validity represents the universe of content, or the domain of a given construct. The questionnaire was judged for content validity (LoBiondo-Wood & Haber 2002:314). The researcher concentrated on the content of the questionnaires, which was derived from the literature review, consultation with experts, and the study objectives. In addition, the questionnaires were tested in the pre-test and corrected where necessary (Polit & Beck 2014:198).

Face validity basically verifies that the instrument gives the appearance of measuring the concept. It is an intuitive type of validity in which experts in the field and the supervisors were asked to read the instrument and evaluate the content in terms of whether it appeared to reflect the concept the researcher intended to study (LoBiondo-Wood & Haber 2002:315). Face validity was ensured during the development of the questionnaires and was evaluated by the scientific review committee of the Department of Health Studies, University of South Africa (UNISA). Trained supervisors did the data cleaning and a statistician and a data analyst entered the data for statistical analysis to ensure the validity of the study. Double entry method (EPI info and SPSS software) was also applied to cross-check the data quality. Open-ended questions were open coded by the researcher.

3.9.2 Reliability

LoBiondo-Wood and Haber (2002:319) refer to reliability as the extent to which the instrument yields the same results on repeated measures. Reliability refers to “the degree of consistency or dependability with which the instrument measures the attribute it is designed to measure. If the instrument is reliable, the results will be the same each time the test is repeated” (Polit & Beck 2014:194).

De Vos et al. (2011:178) describe reliability as the consistency or stability of the measurements. In this study, the researcher ensured that measures were taken so that the data-collection methods were consistent and did not distort the findings in order to meet the requirements for reliability. The researcher ensured that all the questions had the same meaning for all the respondents. Pre-testing was conducted to ensure that the

questionnaires were well understood by all respondents to improve the reliability of the study. The problems observed in the pre-test were addressed to increase the reliability of the study. Two public health officials supervised data collection to ensure reliability (see section 3.11 and 3.12 for details). The researcher was convinced that the data collection process was reliable and enhanced the reliability of the results.

3.10 DATA COLLECTOR AND SUPERVISOR RECRUITMENT AND TRAINING

Six (6) data collectors who had completed a diploma nursing programme were recruited and trained to collect the data for the first phase of the study. Only data collectors who had previously been involved in structured interviewing or collecting data through self-administered questionnaires for other quantitative studies in the past 3 to 5 years were recruited. The supervisors were recruited based on the recommendation of previous PhD fellows who witnessed their good experience in supervision of data collection.

Two days' training was provided to the data collectors and supervisors on 27 and 28 May 2015 at a public health centre, in Addis Ababa. The researcher facilitated the two days' training. The training included a power point presentation, group discussion, and role play. The content of presentation included the objectives of the study, methodology and the questionnaires. The questionnaires were discussed individually with role play on each section.

3.11 DATA COLLECTION

Before data collection commenced, the researcher obtained ethical approval from the Research Ethics Committee, Department of Health Studies at the University of South Africa (see Annexure 6) as well as from the Addis Ababa City Administration Health Bureau (see Annexure 7). The data collectors and supervisors were recruited and trained prior to data collection.

Service providers: Data was collected from the service providers between 1 and 12 June 2015. The heads of the selected public health centres received an institutional support letter from the Addis Ababa City Administration Health Bureau to inform them about the study prior to data collection. After approval, the researcher and supervisors together with data collectors identified who would be eligible for recruitment to possibly

participate in the study. The first service provider was selected randomly and after that every second service provider was selected using a lottery method. The data collectors gave the information letter as well as the voluntary consent form to the selected service providers at the public health centres. The service providers signed the voluntary consent form after they had read and understood the information sheet on the consent form and completed the self-administered questionnaires written in the local language, Amharic. All the service providers read and completed the self-administered questionnaires and returned the completed questionnaires to the data collectors either after the lunch or coffee breaks on the same day. A total of 305 questionnaires were distributed and 305 completed questionnaires were returned, which reflected a 100% response rate.

Clients: Data was collected from the clients between 15 and 26 June, 2015. The researcher identified clients who participated in the study by selecting every 7th client out of 2,687 from the list of appointments (see table 3.1) and informed the data collectors as well as the supervisors to ensure the correct sampling technique applied. The first client was selected randomly using a lottery method. The data collectors read and explained the purpose of the study using the information leaflet as guidance (see Annexures 3 and 4). The participants were selected from the 31 public health centres. After the information sheet and consent form were explained to them, the respondents signed if they agreed to participate in the study. The data collectors interviewed the respondents at the public health centres when they came for family planning and/or HIV services, but after they had received the service. The respondents were interviewed in a private room at the public health centre to maintain confidentiality and privacy. The completed questionnaires were received on a daily basis in the evening of each data collection day by the supervisors and the researcher. The supervisors were two public health professionals who had more than five years' experience in monitoring and supervising data collection in different studies. The researcher was also responsible to oversee the overall data-collection process. The role of the supervisors was to assist the researcher and visit the data collection process at the public health centre where the researcher would not be able to visit all public health centres on the same day. On average, the supervisors and the researcher visited 3 to 4 public health centres per day. A total of 403 questionnaires were distributed and all were returned.

3.12 ETHICAL CONSIDERATIONS

The researcher obtained permission to conduct the study and -upheld the ethical principles of beneficence, privacy, confidentiality, justice and consent (De Vos et al., 2011:119).

3.12.1 Permission

Ethical approval and permission to conduct the study was obtained from the Research Ethics Committee, Department of Health Studies at the University of South Africa (Annexure 6). Institutional consent was obtained from the Addis Ababa City Administration Health Bureau and a copy of the institutional support letter was given to each public health centre and access to the facility was provided (Annexure 7). The information sheets and consent forms (Annexures 3 and 4) provided all the respondents with information on the ethical aspects that applied in the study.

3.12.2 Beneficence

The right to protection from discomfort and harm is based on the ethical principle of beneficence, which holds that one should do good and, above all, do no harm. Beneficence places an obligation on researchers to maximize possible benefits and to minimize possible harm (De Vos et al., 2011:119-120). In this study, the information sheet informed the respondents that participation was voluntary; there were no health risks, and no incentives for participating. Moreover, participation would help identify and prioritize strategies and develop a strategic plan that could facilitate the implementation of integrated family planning and HIV services.

3.12.3 Privacy

The researcher ensured the respondents' privacy and confidentiality. On the basis of the right of privacy, the respondents had the right to anonymity and to assume the data collected would be kept confidential (De Vos et al., 2011:119; Polit & Beck 2014:198). Privacy is the individual's freedom to determine the time, extent and general circumstances under which private information will be shared with or withheld from others. The semi-structured interview questions focused only on the topic under study.

The respondents' privacy was respected and protected at all times during the study as well as afterwards.

All the interviews were conducted in private rooms without interruption. The service providers completed the self-administered questionnaire individually in a separate room during their coffee/lunch time so that they could complete the questionnaire without interruption and they returned the completed questionnaires on the same day.

3.12.4 Confidentiality

The researcher assured the participants of confidentiality and anonymity and respected their privacy. Confidentiality means that information obtained from participants cannot and will not be shared with other persons or institutions without the permission of the participant (Gurayaa, London & Gurayaa 2014:121-126). In this study, the respondents were interviewed after they received their care, in a separate room allocated for the interview. The collected data was stored in a file on a personal computer, and was password protected. The data was not revealed to anyone except to the researcher, the data analyst and the research supervisor. A lockable file cabinet was used to store the hard copies of the questionnaires. These recorded documents will be burned after the examination. Personal information or identifiable data was not provided and no names were given on the questionnaires.

3.12.5 Justice

The right to fair treatment is based on the ethical principle of justice. This principle holds that each person should be treated fairly and should receive what he or she is due or owed (Polit & Beck 2014:172). In this study, the respondents' selection was fair as they were selected for reasons directly related to the problem being studied. Justice means giving an equal chance to study participants to be included in the sample from the defined population (De Vos et al., 2011:119-120). All the respondents had an equal chance of being selected because they were selected randomly.

3.12.6 Informed consent

The researcher explained the purpose, nature and procedure of the study to the respondents. The respondents were informed of that participation was voluntary and that they had the right to refuse to answer questions or to leave the study at any time should they wish to do so, and were told that the interview would last approximately 30 minutes. The respondents were allowed to ask any questions and were then asked to sign the informed consent form (see Annexures 3 and 4).

3.13 DATA ANALYSIS

After data collection, the statistician and the data analyst entered the data using Epi-info version 3.4.1 and SPSS version 20.0. Induction reasoning approaches were applied to analyze the quantitative data (Polit & Beck 2014:605). The statistician analyzed the data using SPSS version 20. Descriptive analysis was applied and the results summarized using frequencies and cross-tabulation. The association between variables was computed by odds ratio, p-value and 95% confidence interval. Bivariate and multi-variate logistics, multi-variate analysis, randomization and triangulation were used to interpret the findings of phase 1 (Hesse-Biber 2010:3).

The open-ended responses were coded by a co-coder and the researcher, and analysed thematically; direct statements or responses were coded into themes and categories (Creswell 2014:18).

3.14 SUMMARY

This chapter described the research design and methodology used to collect information on the integration of family planning and HIV services from the respondents in Phase 1. Chapter 4 discusses the data analysis and interpretation, and findings of phase 1.

CHAPTER FOUR

PHASE 1: DATA ANALYSIS AND INTERPRETATION AND RESULTS

4.1 INTRODUCTION

This chapter discusses the data analysis for phase 1. Data was collected from 403 client respondents in face-to-face interviews, using a structured questionnaire and from 305 service provider respondents, using self-administered questionnaires.

The aim of the study was to develop a strategic plan that could facilitate the implementation of an integrated family planning and HIV service at public health centre level in Addis Ababa, Ethiopia. In order to achieve the aim, the objectives of the study were to

- Describe the challenges and opportunities of clients using integrated family planning and HIV services in public health centres in Addis Ababa, Ethiopia.
- Describe the challenges and opportunities of service providers regarding integrated family planning and HIV services in public health centres in Addis Ababa, Ethiopia.
- Identify strategies that could facilitate the implementation of an integrated family planning and HIV service at the public health centre level.
- Develop a strategic plan that could facilitate the implementation of an integrated family planning and HIV services at the public health centre level in Addis Ababa.

In this study the inputs refer to the geographic accessibility, human resources, fiscal resource (budget), medical resources, infrastructure, strategies, guidelines, policies and behavioural change communication for the use of family planning, HIV services and an integrated family planning and HIV service. In order to identify strategies to facilitate the integration of family planning and HIV services, it was essential to examine the challenges experienced in both family planning and HIV services as they might impact on the integration of these services. Although the respondents' challenges experienced in the family planning and HIV services are discussed separately, they were taken into consideration during the planning and development of a strategic plan to facilitate the

integration of family planning and HIV services. The challenges identified for the two services might also be similar to those that could have an impact on the integration of family planning and HIV services (Haberlen et al., 2017:153).

The statistician, who holds a master's degree in Public Health (in biostatistics and epidemiology) (see Annexure 10), analysed the data using SPSS version 20. The researcher interpreted the data. Descriptive statistics were computed for continuous variables using mean, median and standard deviation. Frequencies and percentages were used for categorical variables. The results from the interviews are discussed first followed by the results from the self-administered questionnaires, and presented in tables, pie charts and bar graphs. Statistical significance testing was done using logistic regression (binary and multi-variate analysis) and presented by OR, p-value and 95% CI. Table 4.1 presents the characters used in the interpretation of the results.

Table 4.1 Characters used in interpretation and description of results

Character	Description
N=	Number of respondents who completed the questionnaire
n=	Number of respondents who completed a specific question in the questionnaire
F=	Number of respondents who responded in a certain way [yes or no]
f=	Percentage of respondents who responded in a certain way

The characters were used in the interpretation and description of results as follows:

N=305; Variable sex: n=305; Female (F=199; f=62.5%) and Male (F=106; f=34.5%).

4.2 CLIENT RESPONDENTS (N=403)

4.2.1 Respondents' distribution by public health centre

Of the respondents, 6.5% (n=26) came from Kotebe public health centre and 1% (n=4) came from Amoraw public health centre (see figure 4.1). Kotebe public health centre

has a high client load compared to other public health centres as it is located in the area where many residents live (Addis Ababa Health Bureau 2014:10).

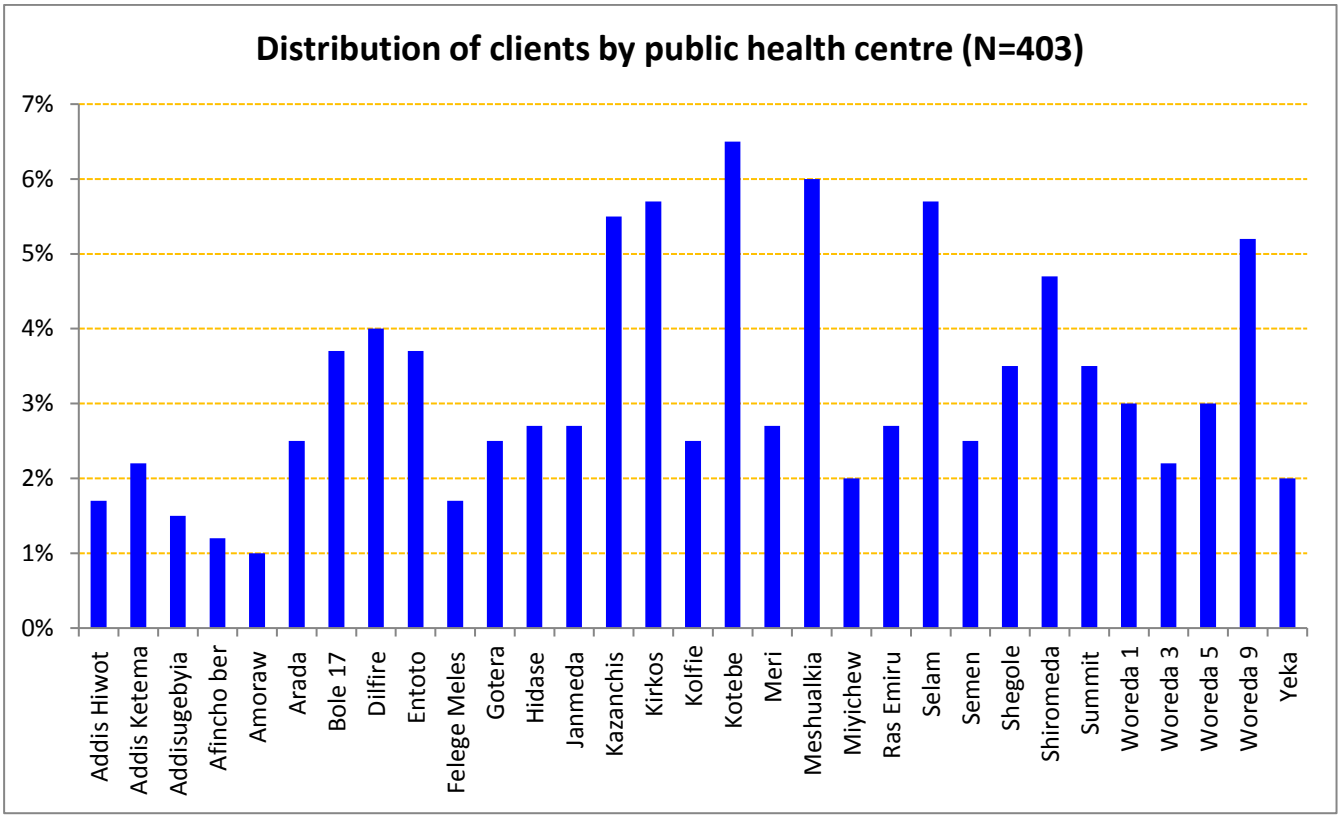

Figure 4.1 Distribution of clients by public health centre (N=403)

4.2.2 Respondents' age (N=403)

The mean age of the respondents was 28.1 years (see table 4.2). Of the respondents, 41.9% (n=169) were 26-30 years old; 26.1% (n=105) were 21-25; 11.9% (n=48) were 31-35; 9.2% (n=37) were 36-40; 7.4% (n=30) were 18-20, and 0.5% (n=2) were 46-50. Lulu, Nigatu, Belachew et al. (2014:197) found that family planning and HIV services were used most often within the age group 25-34. A demographic and health survey of Addis Ababa in 2011 found the median age at child bearing was 23 years (Central Statistic Authority & ICF International 2011:78).

Table 4.2 Respondents' age (N=403)

Age group	Frequency	Percentage	Cumulative frequency	Cumulative percentage
18-20	30	7.4	30	7.4
21-25	105	26.1	135	33.5
26-30	169	41.9	304	75.4
31-35	48	11.9	352	87.3
36-40	37	9.2	389	96.5
41-45	12	3.0	401	99.5
46-50	2	.5	403	100.0

4.2.3 Respondents' religion (N=403)

Of the respondents, 65.5% (n=264) were Orthodox; 18.6% (n=75) were Muslim; 12.2% (n=49) were Protestant; 2.5% (n=10) were Catholic and 1.2% (n=5) were Hawaria (see table 4.3).

Table 4.3 Respondents' religion (N=403)

Religion	Frequency	Percentage	Cumulative frequency	Cumulative percentage
Orthodox	264	65.5	264	65.5
Muslim	75	18.6	339	84.1
Protestant	49	12.2	388	96.3
Catholic	10	2.5	398	98.8
Hawaria	5	1.2	403	100.0

In a study in Oromia Regional State, Ethiopia, Tafa, Haidar and Fekadu (2015:285) found that the majority of the participants were Orthodox followed by Muslim, Protestant, Traditional, Catholic and other religions. Religion was one of the factors associated with the use of family planning services (Tafa et al., 2015:285). Gallagher and Hughes (2014:5) found that Muslims were less likely to use family planning services. In this study, Muslims did make use of family planning services.

4.2.4 Respondents' education (N=403)

The respondents were asked to indicate their highest educational/academic qualifications. Of the respondents, 31% (n=125) had attended high school; 22.8%

(n=92) were illiterate; 19.4% (n=78) had an elementary school education; 18.9% (n=76) had a TVET/diploma; 6.9% (n=28) had a Bachelor's degree, and 1% (n=4) had a master's degree (see figure 4.2). These results concur with Etukudo's (2015:447) finding in South-South Nigeria that 23.7% of the participants were illiterate; 32.6% had completed primary school and 21.6% had completed high school. A mini Ethiopian demographic and health survey in 2014 in Addis Ababa indicated that 33% of the population had a primary education and 14% were illiterate (Central Statistic Authority 2014:23).

A study among women of reproductive age in the Nkwanta District of Ghana found that illiterate women of reproductive age were less likely to make use of family planning service (Eliason, Awoonor-Williams, Eliason et al., 2014:65). A lack of knowledge normally provided in school and/or the inability to read and understand health education materials negatively affected the use of family planning services (Tafese, Woldie & Megerssa 2013:245). In Uganda, Bbaale and Mpuga (2011:33-34) found that positive health-seeking behaviour increased as people's level of education increased. Level of education was a challenge to the use of an integrated family planning service (Central Statistic Authority 2014:23). This study found that 22.8% of the respondents were illiterate, but still accessed the facilities. However, educational status was not a statistically significant factor in the use of family planning services or integrated family planning and HIV services in this study (see table 4.6 and table 4.12).

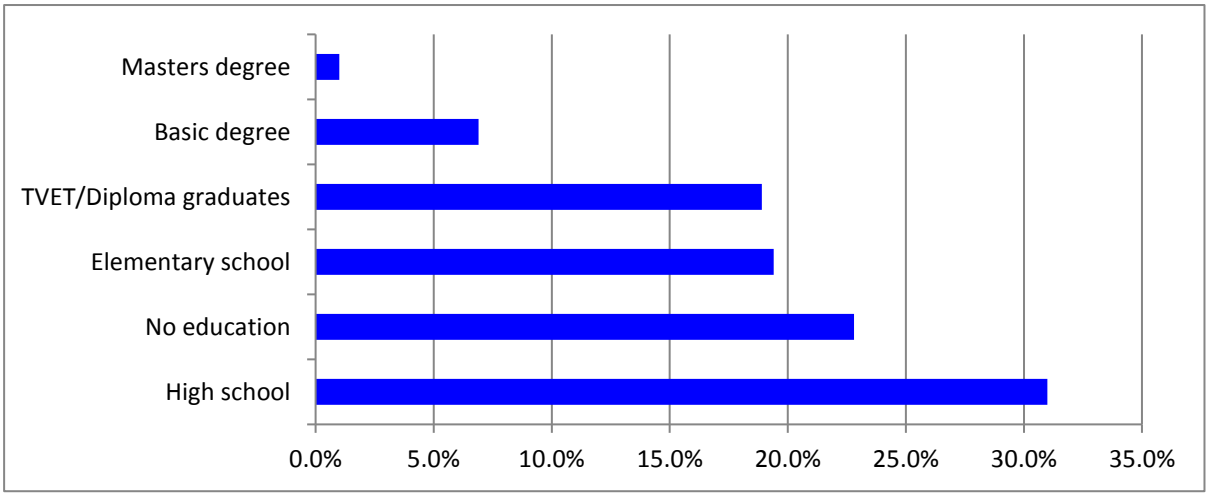

Figure 4.2 Respondents' educational status

4.2.5 Respondents' marital status (N=403)

Of the respondents, 65.5% (n=264) were married and used family planning services compared to their single counterparts. This concurred with Wanyenze, Matovu, Kamya et al. (2015:5) finding that 61.1% of married women made use of family planning service. There is a need for contraceptives and family planning services among HIV-infected and voluntary HIV counselling and testing clients to improve the health of mothers and children (Bradley et al., 2010:1295-1304; Tilahun, Mengistie, Egata & Reda 2012:19).

In this study, widowed marital status (p=0.034) was a statistically significantly associated factor with the use of family planning services that indicated that the widowed respondents were less likely to use family planning services compared to their married, single, divorced and in relationship counterparts (see table 4.6). However; marital status was not statistically significantly associated with HIV testing (see table 4.8) as well as the integrated family planning and HIV services (see table 4.12).

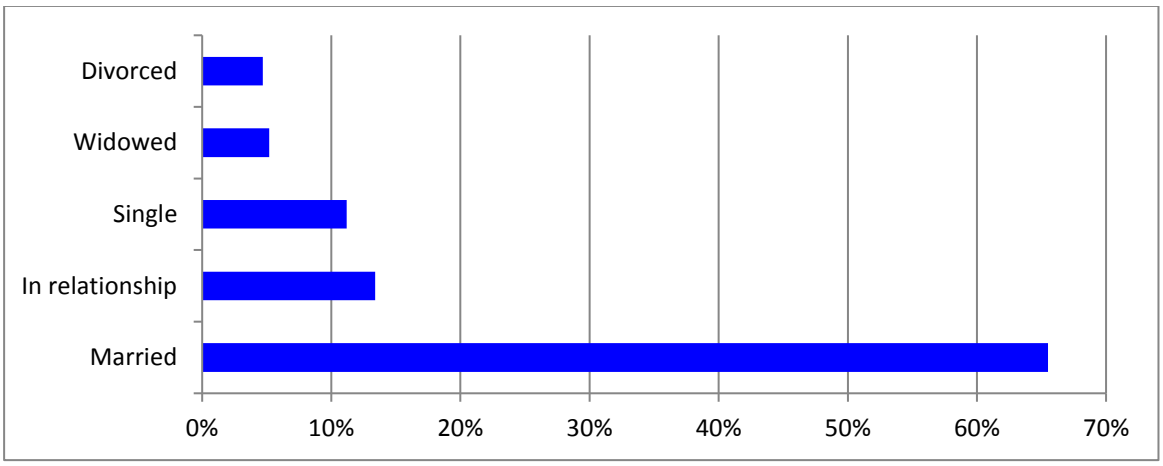

Figure 4.3 Respondents' marital status

4.2.6 Respondents' ethnicity (N=403)

The respondents were asked their ethnicity. Of the respondents, 37.2% (n=150) were Amhara; 31.8% (n=128) were Oromo; 21.3% (n=86) were Guragie; 7.7% (n=31) were Tigrie; 1.2% (n=5) were Gamo, and 0.8% (n=3) were Dorze (see figure 4.4).

In their study in Addis Ababa, Asfaw and Gashe (2014:36) found that of the participants, who used family planning services, 59.5% were Amhara and 22.6% were Oromo. Artiga, Young, Garfield & Majerol (2015:1) found that ethnicity was one of the determinant factors regarding the utilization of family planning services. In 2010, Dehlendorf, Rodriguez, Levy et al. (2010:214-220) found that the acceptance of family planning methods by different ethnic groups was a challenge. The Ethiopian Ministry of Health (MOH Ethiopia 2015a:30) introduced a health sector transformation plan to improve the use of family planning and HIV services through improving awareness in some ethnic groups of the population in emerging regional states.

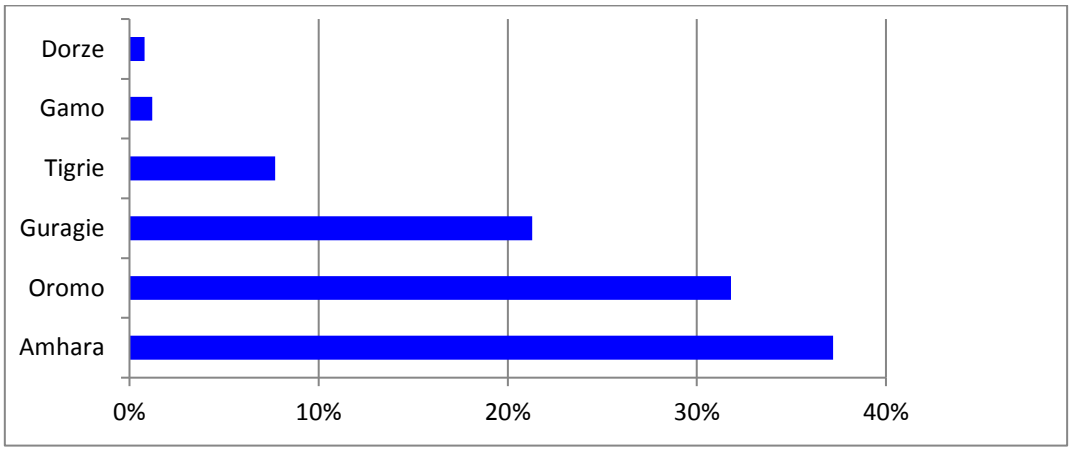

Figure 4.4 Respondents' ethnicity

4.2.7 Respondents' family income (N=403)

The respondents' average family monthly income was US $123.50 per month and the median $93. The respondents' income was thus a bit higher than the average monthly income of about US $46.00 per month (US $ 550.00 per year) reported by the World Bank (2016).

Of the respondents, 48.7% had a monthly income of above the average monthly income (US $93). This could have positively contributed to their utilization of the services as people with a lower income seldom make use of available services (Tekelab, Melka & Wirtu 2015:52). In Pakistan, Kamran, Tasneem, Parveen & Naizi (2015) found that many people could not pay for modern contraceptives. Although most family planning services are free of charge or affordable in Ethiopia (MOH Ethiopia 2011:33), many people struggle to pay for transportation and other expenses to visit the health facilities.

In this study, the binary logistic regression tests indicated that the family monthly income level of between US $81-120 (p=0.009) was a significantly associated factor in the use of an integrated family planning and HIV service compared to monthly income level of <40, 41-80, 121-160,161-200 & 201 and above (see table 4.12). This would seem to indicate that people with a low family income were unlikely to utilize the integrated family planning and HIV services. However, the respondents' family income was not statistically significant in the use of separate family planning (see table 4.6) as well as HIV testing service (see table 4.8).

4.2.8 Respondents' fertility (N=403)

Of the respondents, 82.4% (n=332) had been pregnant in the past and 17.6% (n=71) had never been pregnant. Of the respondents who had been pregnant (n=332), 35.5% (n=118) had been pregnant once (gravida 1); 30.7% (n=102) had been pregnant twice; 16.6% (n=55) indicated three times; 8.1% (n=27) indicated four times, and 9% (n=30) stated five times. The average number of children per respondent was 2.2. The total fertility rate of Addis Ababa between 2010 and 2013 was 1.7, which was lower than the national fertility rate of 4.1 (Central Statistic Authority 2014:29-30).

Of the respondents who had been pregnant (n=332), 77.7% (n=258) had planned pregnancies and 22.3% (n=74) had unplanned pregnancies. The respondents' reasons for unplanned pregnancies (see figure 4.5) concurred with Shahbazin and Gholamy's (2015:22) findings in West Iran and those of Mitiku, Demissie, Belayneh & Meskele (2015:23-29) in Southern Ethiopia. Some respondents gave more than one reason for their unplanned pregnancies. The respondents' reasons for unplanned pregnancy were due to casual sexual intercourse (51.4%; n=38); a lack of awareness about family planning (27%; n=20); failure of contraceptives (10.8%; n=8); missed pills (9.5%; n=7); rape/sexual violence (4.1%; n=3), and inaccessibility of family planning methods (1.4%; n=1). Of concern were pregnancy due to violence/rape and inaccessibility of services. These are unacceptable reasons for unplanned pregnancies and need to be addressed. One of the possible strategies that might be beneficial to reduce unplanned pregnancies is the integration of services, including family planning services (Abayu, Birhanu, Nega & Kidanemariam 2012:4). The binary logistic regression test indicated that the "ever been pregnant (fertility) in the past" option was not a statistically significantly associated

factor in the use of separate family planning service (see table 4.6) as well as an integrated family planning and HIV testing service (see table 4.12).

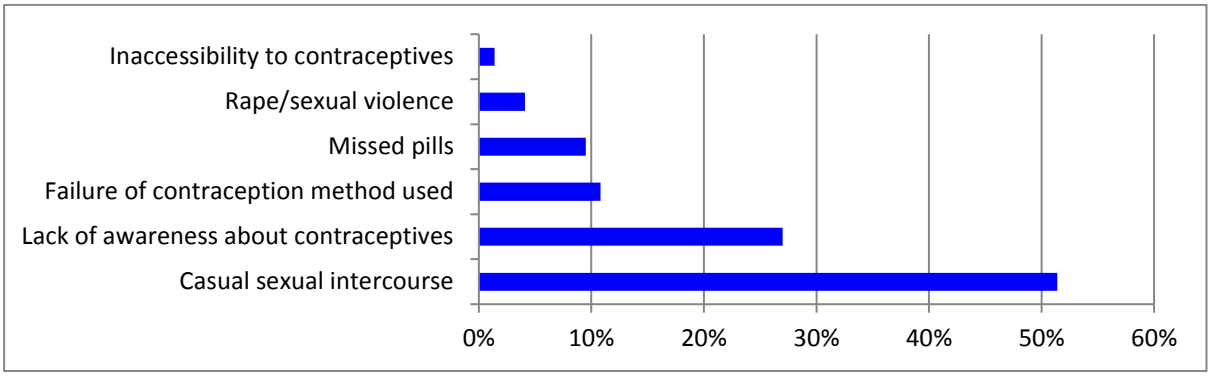

Figure 4.5 Respondents' reasons for unplanned pregnancies (n=74)

4.3 RESPONDENTS' CHALLENGES (OUTPUTS)

This section discusses the challenges regarding family planning, HIV as well as the integrated family planning and HIV services identified by the respondents.

4.3.1 Challenges regarding family planning service (N=403)

Of the respondents, 49.6% (n=200) indicated that there were challenges to family planning services. Of the respondents, 40% (n=80) indicated misconception about family planning; 22% (n=44) indicated a lack of knowledge; 21.1% (n=42) indicated religion; 14.5% (n=29) indicated cultural barriers; 13.5% (n=27) indicated fear of side effects, and 1.5% (n=3) indicated minimal accessibility to family planning methods.

In Nyanza Province, Kenya, misconception and a lack of knowledge were the main contributing factors for poor utilization of family planning services (Steinfeld, Newman, Onono et al., 2013:2-5). In Jimma Zone, Southwest Ethiopia, low educational status contributed to misunderstandings about family planning and how to utilize the services (Tafese et al., 2013:245-254). The challenges experienced by the respondents concurred with Eliason et al. (2014:65) finding that misconceptions about family planning, a lack of knowledge, and cultural and religious issues affected family planning service utilization. Figure 4.6 illustrates the respondents' challenges to family planning service.

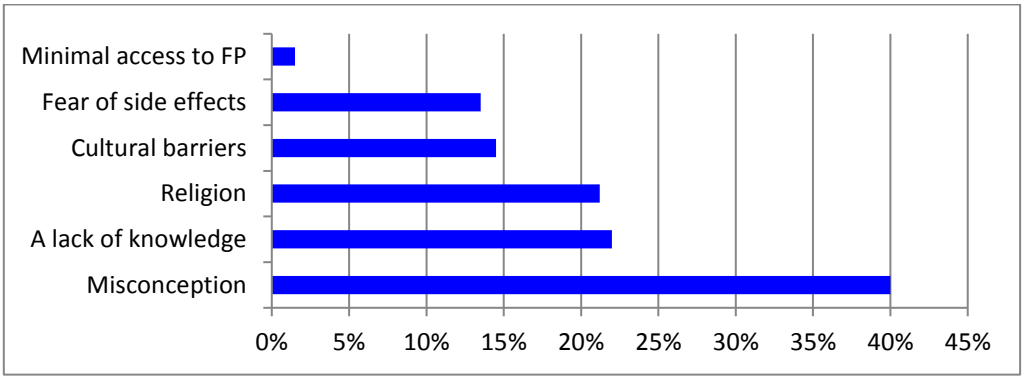

Figure 4.6 Respondents' challenges to family planning services (n=200)

The finding of 40% of misconception related to family planning services positively correlated with Adongo, Tabong, Azongo et al. (2014:137) who found that misconception negatively influenced the use of family planning services. Misconceptions need to be addressed in a strategic plan to facilitate the implementation of integrated family planning and HIV services.

An open question allowed the respondents to explain why they experienced the challenges. The respondents' answers were open coded into themes and categories (see table 4.4). Three themes emerged, namely knowledge about family planning; resources, and men's involvement. The challenges pertaining to knowledge were divided into three categories, namely cultural and religious influences; misconceptions and myths, and respondents' educational level.

Table 4.4 Respondents' explanations for the challenges of family planning

Theme	Categories	Direct statements
Knowledge about family planning	Cultural and religious influences	• My religion does not accept birth control methods. • My religion is Muslim and we do not accept family planning methods/contraception. • It is shameful to use family planning/ contraceptive services due to cultural influence. • I am shy to receive clinical procedures of family planning/contraceptive methods like IUDs. • My culture does not accept family planning. • I believe children are gifts from God and a

Theme	Categories	Direct statements
		sense of wealth.
	Misconceptions and myths about family planning	• Injectables may cause high blood pressure. • IUDs can cause abdominal swelling. • I heard family planning methods can cause inability to have more children • Family planning methods cause multiple pregnancies, liver disease and cancer. • Long-time use of family planning may cause brain disease. • IUD causes abnormal pregnancy or miscarriage. • IUD causes delayed pregnancy. • IUD may move to brain. • Implants may cause hand paralysis. • I heard IUDs may cause pelvic infections. • Family planning methods cannot be taken with ART drugs at the same time. • I fear the side effects of family planning methods.
	Educational level	• I am an illiterate person and I cannot understand the family planning issues easily. • I do not have enough knowledge about family planning as I am unable to read.
Resources	Availability of resources	• Family planning methods/contraceptives are not always available. • I do not know many options of family planning methods/contraceptives because all contraceptives are not always available at the public health centre. • Shortage of family planning methods is one of the challenges.
Men's involvement	The need for men's involvement	• My husband's negative influence to use family planning methods. • I need to wait for my husband's approval for the use of family planning methods. • My husband did not have much information about family planning methods.

The respondents' factors associated with family planning services are discussed on basis of the quantitative data as well as the themes identified from the open-coded question (qualitative data) on challenges regarding family planning services.

4.3.1.1 Knowledge (N=403)

The respondents revealed that a lack of knowledge can influence the family planning service utilization. Knowledge can be obtained from various communication channels. Figure 4.7 indicates where the respondents heard about family planning methods. Some respondents gave more than one answer. Of the respondents, 52.5% (n=210) indicated radio or television; 33.5% (n=135) said service providers; 24.6% (n=99) said friends; 15.6% (n=63) said family members; 8.7% (n=35) said neighbours; 3% (n=12) said school teachers, and 2.5% (n=10) heard about family planning from health extension workers (HEWs). In this study, the binary logistic regression tests indicated that there was a statistically significant relationship between awareness through Radio/Television (p=0.001) and the use of family planning service (see table 4.6).

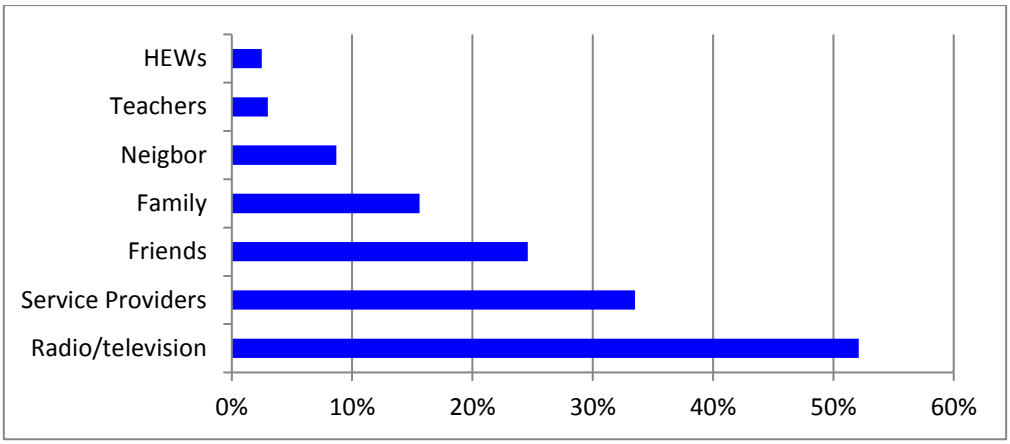

Figure 4.7 Respondents' sources of information about family planning (N=403)

The 2011 Ethiopian demographic and health survey (Central Statistic Authority & ICF International 2011:102-103) found that 57.3% of urban clients heard about health services on the radio and 55.1% heard on television. According to Dharmendra Kumar Tyagi (DKT International) (2016), marketing in social media is a good way to introduce family planning in low-income countries like Ethiopia. Although social media is a good way of addressing knowledge gaps regarding family planning, many people do not have access to social media. Gurmu and Etana (2015:3) found that non-educated people and families with low economic status had no exposure to family planning messages through social media. Besides radio and television, the distribution of printed materials might contribute to increase the level of awareness about family planning for educated people (Gurmu & Etana 2015:3). Of the respondents in this study, 10% (n=14) received printed information. This implies that inaccessibility to social media and lack of access

to printed materials might also be a challenge regarding the utilization of integrated services. The availability of services needs to be shared and understood to increase accessibility (USAID 2014:17-22).

4.3.1.2 Men's involvement (N=403)

Of the respondents, 76.2% (n=307) discussed family planning issues with their husband or partner while 23.8% (n=96) did not (see figure 4.8). The binary logistic regression tests indicated that there is a statistically significant relationship between men's involvement (p=0.001) and the use of family planning services (see table 4.6). Although men's involvement can be a challenge (FHI 2013:8), most respondents in this study discussed family planning with their husbands or partners. In a study in Kenya on overcoming barriers to family planning through integration, Steinfeld et al. (2013:2-5) found that men's involvement was important.

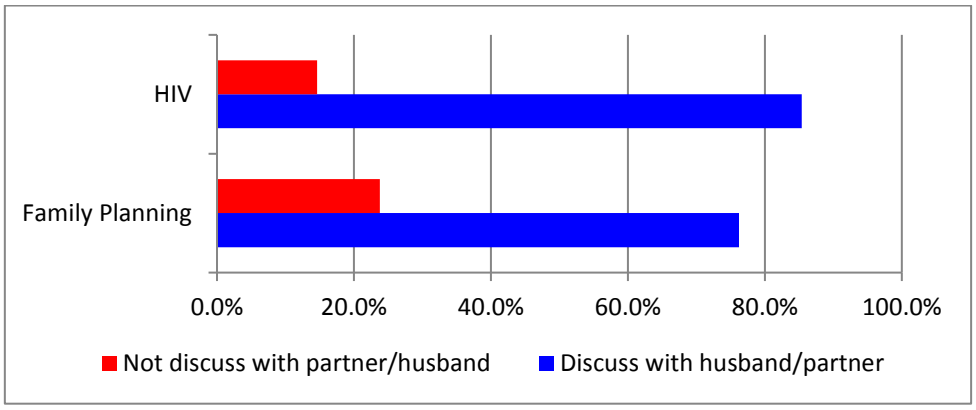

Figure 4.8 Men's involvement in family planning and HIV services (N=403)

In a study in sub-Saharan Africa, Vouking, Evina & Tadenfok (2014:1-5) found that women still have little power of decision making regarding family planning issues. In this study, the respondents who did not discuss family planning with their husbands or partners were asked to give reasons for not doing so. Of the respondents, 96 responded. Their answers were open-coded and three themes emerged in the reasons, namely type of relationship; communication, and men's decision-making power (see table 4.5).

Table 4.5 Respondents' reasons for lack of male involvement in family planning

Theme	Direct statements
Type of relationship	• I am divorced. • My husband is not around most of the time. • I did not have a legal marriage with my partner. • I have short time of engagement with my husband. • I am widowed.
Communication	• I never talked about family planning issues. • I am too shy to discuss family planning. • I do not always discuss with my husband on family planning. • I do not want to get pregnant and use family planning methods without my husband knowing. • I fear divorce if I talk about family planning issues. • My husband is not interested to talk about family planning. • I do not know my husband's opinion.
Men's decision-making power	• I am too afraid of my husband to decide on family planning by myself alone. • I do not have approval for the use of contraceptives from my partner. • My partner is not interested to discuss about family planning issues • I never thought about family planning as the decision is made by my husband only. • My husband wanted to have more children and I should follow his decision.

4.3.1.3 Religious and cultural beliefs (n=200)

Of the respondents who indicated that there were challenges related to family planning services, 35.5% (n=71) indicated that religion and cultural beliefs influenced their utilization of family planning. Culture and religious beliefs can contribute to low utilization of family planning services, particularly in the Catholic and Muslim context (Arousell & Carlbom 2016:77-78). The Ministry of Health (MOH Ethiopia 2011:39) identified religious and cultural beliefs as challenges that need attention to improve awareness of family planning.

Statistical significance testing using logistic regression (bivariate and multivariate) was conducted to determine whether there were any significant factors that could be associated with the utilization of family planning services (see table 4.6). The applicable significance is discussed and referred to in the text where necessary.

Table 4.6 Statistical significance testing of factors associated with the respondents' use of family planning services (N=403)

Covariate	Use of family planning methods		Crude Odds Ratio (95%CI)	Adjusted OR (95%CI)
	Yes	No		
Educational status				
Able to read and write	56 (80%)	14 (20%)	1	NA**
Elementary school	58 (74.4%)	20 (25.6%)	.725 (.334, 1.574)	NA**
High school (10-12 completed)	98 (78.4%)	27 (21.6%)	.907 (.440, 1.872)	NA**
TVET/Diploma level	64 (84.2%)	12 (25.8%)	1.333 (.570, 3.121)	NA**
Basic degree	22 (78.6%)	6 (21.4%)	.917 (.313, 2.689)	NA**
Others	18 (69%)	8 (31%)	.437 (.153, 1.247)	NA**
Marital status				
Married	214 (81.1%)	50 (18.9%)	1.223 (.600, 2.491)	1.589 (.376, 6.723)
Single	35 (77.8%)	10 (22.2%)	1.000 (.386, 2.590)	40.100
Widowed	11 (52.4%)	10 (47.6%)	.314 (.108, .916)*	.154
Divorced	14 (73.7%)	5 (26.3%)	.800 (.240, 2.672)	11.100
In a relationship	42 (77.8%)	12 (22.2%)	1	
Family income level				
0-40 US $	74 (72.5%)	28 (27.5%)	1	NA**
41-80 US $	88 (80%)	22 (20%)	1.514 (.799, 2.865)	NA**
81-120 US $	59 (73.8%)	21 (26.2%)	1.063 (.549, 2.059)	NA**
121-160 US $	46 (83.6%)	9 (16.4%)	1.934 (.838, 4.463)	NA**
161-200 US $	22 (84.6%)	4 (15.4%)	2.081 (.658, 6.577)	NA**
>=201 US $	27 (90%)	3 (10%)	3.405 (.957, 12.121)	NA**
Ever been pregnant (Fertility)				
Yes	268 (80.4%)	65 (19.6%)	1.084 (.884, 1.331)	NA**
No	48 (68.6%)	22 (31.4%)	1	NA**
Source of information				
Radio/TV				
Yes	93 (68.9%)	42 (31.1%)	.447 (.275, .726)*	.902 (.284, 2.864)
No	223 (83.2%)	45 (16.8%)	1	NA**
Service provider				
Yes	172 (81.9%)	38 (18.1%)	2.081 (.951, 4.554)	.456 (.121, 1.719)
No	144 (74.6%)	49 (25.4%)	1	NA**
Family members				
Yes	55 (87.3%)	8 (12.7%)	1.540 (.955, 2.484)	4.185 (.825, 21.235)
No	261(76.8%)	79 (23.2%)	1	NA**
Friends				
Yes	80 (80.8%)	19 (19.2%)	1.213 (.687, 2.142)	NA**
No	236 (77.6%)	68 (22.4%)	1	NA**
Neighbour and health extension workers				

Covariate	Use of family planning methods		Crude Odds Ratio (95%CI)	Adjusted OR (95%CI)
	Yes	No		
Yes	40 (85.7%)	5 (14.3%)	1.720 (.647, 4.575)	NA**
No	276 (77.1%)	82 (22.9%)	1	NA**
Others				
Yes	9 (75%)	3 (25%)	.821(.217,3.100)	NA**
No	307 (78.5%)	84 (21.5%)	1	NA**
Male involvement				
Yes	271 (88.3%)	36 (11.7%)	8.531(5.018, 14.504)*	2.001 (.318, 12.58)
No	45 (46.9%)	51 (53.1%)	1	NA**
Waiting time				
Less than 15 minutes	34 (73.9%)	12 (26.1%)	.872 (.238, 3.198)	NA**
Between 16-30 minutes	97 (77%)	29 (23%)	1.029 (.312, 3.400)	NA**
Between 31-45 minutes	98 (79%)	26 (21%)	1.160 (.349, 3.855)	NA**
Between 46-60 minutes	53 (86.9%)	8 (13.1%)	2.038 (.531, 7.823)	NA**
Between 61-90 minutes	21 (72.4%)	8 (27.6%)	.808 (.202, 3.227)	NA**
More than 90 minutes	13 (76.5%)	4 (23.5%)	1	NA**
Counselling				
Yes	120 (85.7%)	20 (14.3%)	3.222 (.550, 18.889)	.289 (.018, 4.731)
No	196 (74.5%)	67 (25.5%)	1	NA**
Client satisfaction				
Highly satisfied	171 (78.8%)	46 (21.2%)	1.394 (.356, 5.465)	NA**
Satisfied	96 (73.8%)	34 (26.2%)	1.059 (.265, 4.223)	NA**
Somewhat satisfied	41 (91.1%)	4 (8.9%)	3.844 (.718, 20.577)	NA**
Not at all satisfied	8 (72.7%)	3 (21.8%)	1	NA**

*p<0.05, NA** not applicable as P>0.02 were not computed in multivariate logistic regression (Teshome & Yalew 2015:10)

4.3.2 Respondents' challenges regarding HIV services (N=403)

Of the respondents, 31% (n=125) answered the question on stigma and discrimination. The HIV-positive respondents were asked to rate the challenges regarding stigma and discrimination according to a scale of agree, sometimes agree, feel neutral, sometimes disagree or disagree (n=125). In the analysis and interpretation, agree and sometimes agree as well as disagree and sometimes disagree were grouped together (see table 4.7).

4.3.2.1 Stigma and discrimination of persons living with HIV (n=125)

The respondents identified aspects pertaining to stigma and discrimination as a challenge regarding the utilization of HIV services (n=125). Table 4.7 indicates that of the HIV-positive respondents, 94.4% (n=118) indicated that it is difficult to share their HIV-positive status with other people; 61.6% (n=77) felt guilty; 48% (n=60) felt ashamed; 38.4% (n=48) felt disrespected by other people, and 14.4% (n=18) felt they were given less attention than other patients in health facilities. The Human Sciences Research Council (HSRC 2015:18) found that persons living with HIV had internal feelings of shame (29%); had guilt feelings (28%); blamed themselves (31%), and had low self-esteem (22%). In New Zealand, Gultie, Genet & Sebsibie (2015:212) found that HIV-positive people on ART treatment hesitated to disclose their status through fear of social stigma and discrimination and rejection by partner/husband and other family members. The internal feelings of persons living with HIV might be a challenge for the utilization of HIV services (AVERTing HIV and AIDS 2016). In a study on the experiences of stigma of HIV-positive women, Colombini, Mutemwa, Kivunaga et al. (2014:412) found that the integration of services might help to reduce the stigma and discrimination as clients with diverse needs utilised the services. Clients did not always know what services others utilized.

Table 4.7 Stigma and discrimination of persons living with HIV (n=125)

Issue	Frequency	Percentages	Cumulative frequency	Cumulative percentages
It is difficult to tell the people about my HIV infection				
Agree	118	94.4	118	94.4
Neutral	2	1.6	120	96
Disagree	5	4.0	125	100
I feel guilty that I am HIV positive				
Agree	77	61.6	77	61.6
Neutral	2	1.6	79	63.2
Disagree	46	36.8	125	100
I am ashamed that I am HIV positive				
Agree	60	48.0	60	48.0
Neutral	2	1.6	62	49.6
Disagree	63	50.4	125	100

Issue	Frequency	Percentages	Cumulative frequency	Cumulative percentages
Exhibited hostility or a lack of respect towards to you				
Agree	48	38.4	48	38.4
Neutral	3	2.4	51	40.8
Disagree	74	59.2	125	100
Give you less attention in health facility than other patients or clients				
Agree	18	14.4	18	14.4
Neutral	2	1.6	20	16
Disagree	105	84	125	100
I feel worthless because I am HIV positive				
Always	12	9.6	12	9.6
Sometimes	59	47.2	71	56.8
Never	54	43.2	125	100
I hide my HIV status from others				
Always	56	44.8	56	44.8
Sometimes	60	48	116	92.8
Never	9	7.2	125	100

Table 4.7 indicates that of the HIV-positive respondents, 47.2% (n=59) sometimes felt that they were worthless persons and 48% (n=60) indicated this was why they would like to hide themselves from other people.

As in the case of family planning services, statistical significance testing was done to determine possible significant factors that could be associated with the utilization of HIV service using logistic regression (bivariate and multivariate). Table 4.8 indicates the statistical significance testing of factors associated with HIV testing. The appropriate results will be referred to where applicable.

Table 4.8 Statistical significance testing of factors associated with the HIV testing (N=403)

Covariate	HIV testing		Crude OR (95%CI)	Adjusted OR (95% CI)
	Yes	No		
Marital status				
Married	260 (98.5%)	4 (1.5%)	1.226(.134, 11.192)	NA**
Single	43 (95.6%)	2 (4.4%)	.406(.036, 4.626)	NA**
Widowed	21 (100%)	0 (0%)	.000	NA**
Divorced	19 (100%)	0 (0%)	.000	NA**
In a relationship	53 (98.1%)	1(1.9%)	1	NA**
Income level				
0-40 US $	100 (98%)	2 (2%)	1	NA**
41-80 US $	108 (98.2%)	2 (1.8%)	1.080 (.149, 7.812)	NA**
81-120 US $	79 (98.8%)	1 (1.2%)	1.580 (.141, 17.742)	NA**
121-160 US $	54 (98.2%)	1 (1.8%)	1.080 (.096, 12.184)	NA**
161-200 US $	25(96.2%)	1(3.8%)	.500 (.044, 5.737)	NA**
>=201 US $	30(100%)	0 (0%)	.000	NA**
Male involvement				
Yes	301 (98%)	6 (2%)	.528 (.063, 4.442)	NA**
No	95 (99%)	1(1%)	1	NA**
Waiting time				
Less than 15 minutes	45 (97.8%)	1 (2.2%)	.000	NA**
Between 16-30 minutes	125 (99.2%)	1 (0.8%)	.000	NA**
Between 31-45 minutes	120 (96.8%)	4 (3.2%)	.000	NA**
Between 46-60 minutes	60 (98.4%)	1 (1.6%)	.000	NA**
Between 61-90 minutes	29 (100%)	0 (0%)	1.000	NA**
More than 90 minutes	17 (100%)	0 (0%)	1	NA**
Counselling				
Yes	134 (95.7%)	6 (4.3%)	.000	NA**
No	262 (99.6%)	1(.4%)	1	NA**
Client satisfaction				
Highly satisfied	216 (99.5%)	1 (0.5%)	21.600 (1.258, 370.955)*	18.336 (1.045, 321.626)
Satisfied	128 (98.5%)	2 (1.5%)	6.400 (.533, 76.824)	5.641 (.461, 68.964)
Somewhat satisfied	42 (93.3%)	3 (6.7%)	1.400 (.131, 14.915)	1.343 (.124, 14.499)
Not at all satisfied	10 (90.9%)	1 (9.1%)	1	1

*p<0.05, NA** not applicable as P>0.02 were not computed in multivariate logistic regression (Teshome and Yalew 2015:10)

4.3.2.2 Men's involvement (N=403)

Another challenge pertaining to the use HIV service is male involvement. Batte, Katahoire, Chimoyi et al. (2015:1-8) found that people did not always disclose their HIV status to their spouses or partners. Of the respondents, 14.6% (n=58) did not want to disclose their HIV status and provided reasons for not disclosing their HIV status to their

husband or partner. In this study, men's involvement did not have a statistical relationship with HIV testing (see table 4.8). Table 4.9 presents the respondents' reasons, namely type of relationship; fear of negative consequences, and readiness to disclose.

Table 4.9 Respondents' reasons for the lack of male involvement

Reason	Direct statements
Type of relationship	• I am already separated from my husband. • My husband lives in another place. • My husband died. • We do not have a legal marriage. • We have short time for marriage engagement. • I did not have a partner at the time of my HIV test.
Fear of negative consequences	• I am scared to disclose the HIV status to my husband. • I fear my husband will divorce me. • Causes loss of trust and blaming each other with my partner. • I fear my husband will not give me money anymore because I do not have any income. • I fear conflicting with my partner. • I fear my husband may be angry with me.
Readiness to disclose	• I need time to share my HIV test result with my husband. • It was not easy to share the HIV status immediately with my partner. • I did not share my HIV status with my husband.

4.3.3 Challenges regarding an integrated family planning and HIV service

The respondents identified the following challenges regarding the integrated family planning and HIV services.

4.3.3.1 Utilisation of family planning and HIV integrated service (N=403)

Of the respondents, 13.9% (n=56) had received the integrated family planning and HIV service although 90.1% (n=363) indicated that they had the intention to utilize the integrated family planning and HIV services.

Few people received integrated family planning and HIV services or utilized integrated family planning and HIV services (Adamchak, Janowitz, Liku et al., 2011:44; Harrington, Newman, Onono et al., 2012:8).

Table 4.10 lists the respondents' reasons for not utilizing integrated family planning and HIV services. Of the respondents, 33.1% (n=115) came for HIV testing and already used some form of family planning method prior to the interview date (15-26 June 2015); 18.2% (n=63) did not know about the availability of integrated services; some 26.8% (n=93) blamed the long waiting time, and 0.6% (n=2) indicated that the integrated service was too expensive. A lack of knowledge and long waiting times affect the utilization of integrated family planning and HIV services (Mulindwa Nsiyi, Harrison, Phiri et al., 2015:106). These factors influence family planning as well as HIV services even if they are not integrated (Tessema, Gomersall, Mahmood & Laurence 2016:1371; Nyika, Mugurungi, Shambira et al., 2016:369).

Of the respondents, 21.3% (n=74) indicated that they were already pregnant and came for antenatal care follow-up thus they received integrated antenatal care and HIV service. The integrated health services need to be promoted and the number of service providers increased to offer integrated health services (Deressa et al., 2015:3-4; WHO 2015f).

Table 4.10 Respondents' reasons for not receiving integrated family planning and HIV service (n=273)

Reasons for not receiving integrated family planning and HIV service	Frequency	Percentage
Long waiting time	93	34.1
Did not know the availability of integrated service	63	23.1
The service is expensive	2	0.7
Currently using some form of family planning method	115	42.1
Total	**273**	**100.0**

Of the respondents, 6.9% (n=28) indicated that they experienced no challenges to the use of an integrated family planning and HIV service while 93.1% (n=375) experienced challenges. Of the respondents, 93% (n=347) indicated long waiting times as the reason for not utilizing the integrated family planning and HIV service (see table 4.10).

Of the respondents, 65% (n=262) indicated that the main challenge regarding the integrated family planning and HIV services was the increased waiting time; 23.1% (n=93) indicated that the quality of the services might be compromised; 2.7% (n=11) indicated a shortage of human resources; 1.2% (n=5) said that the integrated service was too expensive; 0.7% (n=3) indicated low awareness of the community, and 0.2% (n=1) indicated low men's involvement (see table 4.11). These findings correlate with the data provided by that indicated that shortage human resources, low community awareness and lack of men's involvement were challenges to family planning integration with HIV services as well as for family planning and HIV services without integration (FHI 2013:4; Smit et al., 2012:48; (Mwambetania, Mugizi, Hamis & Mchaki 2014:11). The average time spent by service providers was estimated to be more than 1hour and 30 minutes per single visit (USAID 2015b:16). These are some of the challenges to facilitating the integration of family planning and HIV services (FHI 2013:4).

Table 4.11 Respondents' observed challenges of integrated family planning and HIV services (n=375)

Challenges of integrated family planning and HIV services	Frequency	Percentage
Increased waiting time	262	65.0
The integrated service is too expensive	5	1.2
Quality of care might be compromised	93	23.1
Shortage of human resources	11	2.7
Low awareness of the community	3	0.7
Low men involvement	1	0.2
Total	**375**	**100.0**

4.3.3.2 Waiting time (N=403)

Table 4.13 shows that of the respondents, 31.3% (n=126) waited between 16 and 30 minutes to receive either family planning, HIV or integrated family planning and HIV services after arrival; 30.8% (n=124) waited for 31-45 minutes, and 11.4% (n=46) waited less than 15 minutes.

Binary logistic regression showed that long waiting time was not statistically significantly associated with the use of separate family planning (see table 4.6) and HIV testing

services (see table 4.8). However, long waiting times was statistically significantly associated with the use of integrated family planning and HIV testing services.

Table 4.12 Statistical significance testing of factors associated with FP and HIV integration (N=403)

Covariate	Use of integrated FP/HIV service		Crude OR (95%CI)	Adjusted OR (95% CI)
	Yes	No		
Educational status				
Able to read and write	7 (10%)	63 (90%)	1	NA**
Elementary school	14 (17.9%)	64 (82.1%)	1.969 (.745, 5.202)	NA**
High school(10-12 Completed)	21 (16.8%)	104 (83.2%)	1.817 (.731, 4.519)	NA**
TVET/Diploma level	10 (13.2%)	66 (86.8%)	1.364 (.489, 3.803)	NA**
Basic degree	2 (7.1%)	26 (92.9%)	.692 (.135, 3.557)	NA**
Master's degree	0 (0%)	4 (100%)	.000	NA**
Other	2 (9.1%)	20 (80.9%)	.900 (.173, 4.686)	NA**
Marital status				
Married	34 (12.9%)	230 (87.1%)	.517 (.248, 1.080)	.353 (.123, 1.016)
Single	8 (17.8%)	37 (82.2%)	.757 (.279, 2.053)	.853 (.198, 3.678)
Widowed	0 (0%)	21 (100%)	.000	.000
Divorced	2 (10.5%)	17 (89.5%)	.412 (.083, 2.038)	.322 (.048, 2.166)
In a relationship	12 (22.2%)	42 (72.8%)	1	1
Family income level				
0-40 US $	19 (18.6%)	83 (81.4%)	.752 (.282, 2.008)	.858 (.259, 2.843)
41-80 US $	15 (13.6%)	95 (86.4%)	.519 (.190, 1.419)	.799 (.235, 2.713)
81-120 US $	4 (5%)	76 (95%)	.173 (.046, .644)*	.286 (.066, 1.231)
121-160 US $	8 (14.5%)	47 (85.5%)	.559 (.181, 1.732)	.990 (.243, 4.033)
161-200 US $	3 (11.5%)	23 (88.5%)	.429(.098, 1.865)	.699 (.134, 3.644)
>=201 US $	7 (23.3%)	23 (76.7%)	1	1
Ever been pregnant (fertility)				
Yes	48 (14.5%)	284 (85.5%)	.791 (.610, 1.026)	.982 (.727, 1.325)
No	8(11.3%)	63 (88.7%)	1	NA**
Awareness of FP methods				
Awareness of OCP				
Yes	52 (14.2%)	313 (85.8%)	1.412 (.481, 4.145)	NA**
No	4 (10.5%)	34 (89.5%)	1	NA**
Awareness of male condom				
Yes	33 (19.6%)	135 (80.4%)	2.253 (1.269, 4.002)*	1.521 (.695, 3.331)
No	23 (9.8%)	212 (90.2%)	1	NA**
Awareness of female condom				
Yes	3 (16.7%)	15 (83.3%)	1.253 (.351, 4.475)	NA**
No	53 (13.8%)	332 (86.2%)	1	NA**

Covariate	Use of integrated FP/HIV service		Crude OR (95%CI)	Adjusted OR (95% CI)
	Yes	No		
Awareness of emergency FP				
Yes	27 (20.8%)	103 (79.2%)	2.206 (1.244, 3.910)*	1.735 (.802, 3.753)
No	29(10.6%)	244 (89.4%)	1	NA**
Awareness of injectable				
Yes	54 (14.4%)	321 (85.6%)	2.187 (.504, 9.481)	NA**
No	2 (7.1%)	26 (92.9%)	1	NA**
Awareness of implants				
Yes	51 (15.4%)	281 (84.6%)	2.396 (.920, 6.237)	1.893 (.562, 6.374)
No	5 (7%)	66 (93%)	1	NA**
Awareness of IUD				
Yes	42 (14.8%)	142 (85.2%)	1.302 (.682, 2.485)	NA**
No	14 (6.4%)	205 (93.6%)	1	NA**
Male involvement				
Yes	47 (15.3%)	260 (84.7%)	1.747 (.823, 3.712)	.727 (.278, 1.896)
No	9 (9.4%)	87 (90.6%)	1	NA**
Waiting time				
Less than 15 minutes	2 (4.3%)	44 (95.7%)	1	1
Between 16-30 minutes	18 (14.3%)	108 (85.7%)	3.667 (.816,16.471)	3.850 (.786,18.864)
Between 31-45 minutes	25 (20.2%)	99 (79.8%)	5.556 (1.260,24.489)*	6.525(1.338,31.827)*
Between 46-60 minutes	7 (11.5%)	54 (88.5%)	2.852 (.564,14.426)	2.937(.498,17.337)
Between 61-90 minutes	1 (3.4%)	28 (96.6%)	.786 (.068,9.076)	1.028 (0.080,13.170)
More than 90 minutes	3 (17.6%)	14 (82.4%)	4.714 (.714,31.130)	9.024(1.202,67.767)*
Counselling				
Yes	53 (39.6%)	81 (60.4%)	.654 (.127, 3.364)	NA**
No	3 (1.1%)	266 (98.9%)	1	NA**
Client satisfaction				
Highly satisfied	39 (18%)	178 (82%)	2.191(.272, 17.619)	2.060 (.205,20.674)
Satisfied	13 (10%)	117 (90%)	1.111 (.132, 9.387)	1.187 (.110, 12.824)
Somewhat Satisfied	3 (6.7%)	42 (93.3%)	.714 (.067, 7.610)	.407 (.027, 6.139)
Not at all satisfied	1 (9.1%)	10 (90.9%)	1	1

*p<0.05, NA** not applicable as P>0.02 were not computed in multivariate logistic regression (Teshome & Yalew 2015:10)

Further analysis of the variables using multiple logistic regression showed that waiting time was a significant predictor of the use of integrated family planning and HIV service (see table 4.12). There was 6 times more risk of not utilizing an integrated family planning/HIV services when a client waited 31-45 minutes in the facility compared to when the waiting time was less than 15 minutes with p value=0.02 (AOR = 6.525, 95%

CI: 1.338–31.827) (see table 4.12). Likewise, waiting times of more than 90 minutes had 9 times more risk of not making use of integrated family planning/HIV services compared to a waiting time of less than 15 minutes with p value=0.032 (AOR = 9.024, 95% CI: 1.202–67.767). The study found that long waiting times before service were a challenge to utilisation of the integrated family planning and HIV services.

Shorter waiting times increased the utilization of family planning and other services and client satisfaction (Tafese et al., 2013:245-254). Of the respondents, 30.8% (n=124) waited 31-45 minutes; 15.1% (n=61) waited 46-60 minutes; 7.2% (n=29) waited 61-90 minutes, and 4.2% (n=17) waited 90 minutes or more (see table 4.13). This might have an effect on utilization of family planning, HIV and integrated family planning and HIV services.

Table 4.13 Respondents' waiting time for family planning service (N=403)

Time	Frequency	Percentage	Cumulative frequency	Cumulative percentage
Less than 15 minutes	46	11.4	46	11.4
Between 16-30 minutes	126	31.3	172	42.6
Between 31-45 minutes	124	30.8	296	73.4
Between 46-60 minutes	61	15.1	357	88.6
Between 61-90 minutes	29	7.2	386	95.8
More than 90 minutes	17	4.2	403	100.0

4.3.3.3 Knowledge about family planning methods (N=403)

The integration of family planning and HIV services is associated with knowledge of modern family planning methods (Haberlen et al., 2017:153). In this study, the binary logistic regression indicated that the awareness of family planning methods regarding male condoms (p=0.006) and awareness of family planning methods regarding emergency contraception (p=0.006) were statistically significantly associated with the use of integrated family planning and HIV services (see table 4.12). Awareness of male condoms has a positive impact on the use of dual protection from pregnancy as well as HIV transmission as part of an integrated service (Marie Stopes International 2015:2). A lack of knowledge of modern family planning methods is a challenge for the integration of family planning and HIV services.

4.3.3.4 Transportation (N=403)

Table 4.14 shows that of the respondents, 47.6% (n=192) indicated that they used a taxi to get to the public health centre; 45.9% (n=185) walked; 4% (n=16) used public buses, and 2.5% (n=10) used private vehicles. In a study conducted in Addis Ababa, Fenta (2014:121-128) found that 48% of the participants used taxis and public buses, 43% walked and 9% used private vehicles. The participants who had to pay for transportation found it costly as many of them lived up to 20 km away from the public health centre (Fenta 2014:121-128).

Only people with a monthly family income level of US $ 81-120 might be able to afford transportation while others with a lower income might find the services inaccessible which needs to be addressed for better service utilization (Wilson & Effiong 2008:69).

Table 4.14 Respondents' means of transportation to reach to public health centres (N=403)

Mode of transportation	Frequency	Percentage	Cumulative frequency	Cumulative percentage
Walked	185	45.9	185	45.9
Public bus	16	4.0	201	49.9
Taxi	192	47.6	393	97.5
Private vehicle	10	2.5	403	100.0

4.4 RESPONDENTS' OPPORTUNITIES (OUTPUTS)

The respondents' opportunities regarding family planning, HIV and integrated family planning services are described below.

4.4.1 Opportunities regarding family planning services

The respondents identified important positive aspects pertaining to family planning services that should be used when developing a strategic plan to facilitate the implementation of an integrated service.

4.4.1.1 Utilisation (N=403)

Of the respondents, 100% (N=403) consulted a service provider for health care service on the day of the interview. Of the respondents, 60.3% (n=243) came primarily for HIV services; 25.8% (n=104) came primarily family planning service; 8.7% (n=35) came primarily for integrated family planning and HIV services, and 5.2% (n=21) came for other medical services. Of the respondents, 78.4% (n=316) had previously used family planning methods to prevent pregnancy prior to the day of interview and 21.6% (n=87) had not used any kind of family planning before (see table 4.6).

Of the respondents, 34.7% (n=140) received family planning service on the day of the interview because they decided to receive family planning service after they attended counselling at the public health centres.

Figure 4.9 indicates that of the respondents who received a family planning method on the day of the interview, 45% (n=63) received injectable types; 31.4% (n=44) received implants; 12.1% (n=17) received IUDs; 8.6% (n=12) oral contraceptive pills, and 2.9% (n=4) received male condoms. In 2014, an Ethiopian demographic and health survey found that the most popular methods of family planning were injectables and implants (Central Statistic Authority 2014:34).

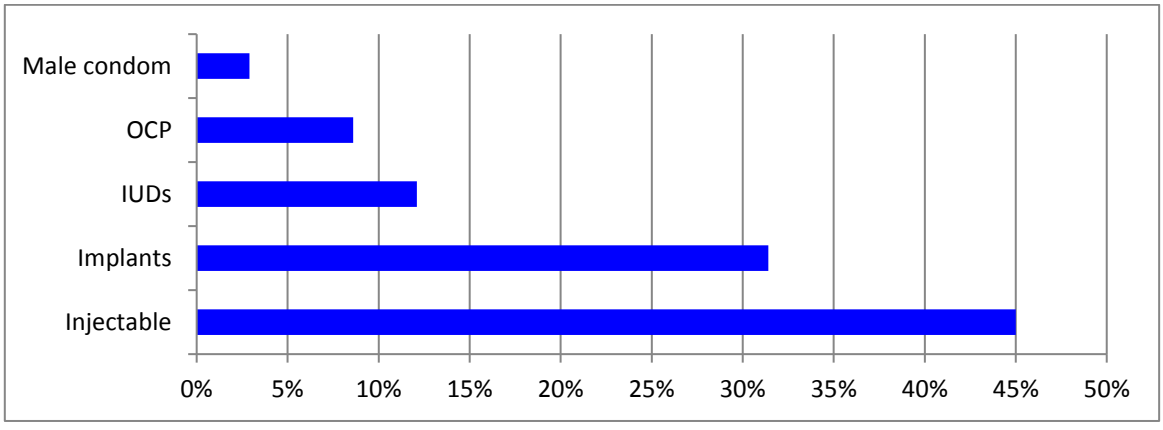

Figure 4.9 Respondents' type of family planning methods received on the day of interview (n=140)

4.4.1.2 Counselling (n=140)

Counselling refers to a process that enables clients to make and follow through on decisions about aspects of family planning and HIV services (WHO 2011). The respondents who received family planning service were counselled by service providers before and after service provision. Of the respondents, 91.4% (n=128) were assisted to choose their own family planning methods. Table 4.15 indicates that of the respondents, (F=134; f=95.7%) adequate information about different family planning or contraceptive methods during counselling; (F=133; f=95.3%) were told about side effects of family planning methods; (F=132; f=94.3%) made follow-up appointments; (F=129; f=92.1%) discussed family planning method preferences; (F=116; f=82.9%) discussed current methods of contraception/family planning problems; (F=114; f=81.4%) were given suggestions on action to resolve family planning method related problems; (F=111; f=79.3%) were told what to do if they had any problems with the method they chose; (F= 109; f=77.9%) discussed the reason for their visit, and (F=108; f=71.1%) discussed the reproductive goal and family planning. The CDC (2014:7-15) states that the quality of family planning service is determined by the complete steps of counselling followed by service providers. In this study, counselling was not a statistically significant factor associated with the use of family planning services (see table 4.6), HIV testing service (see table 4.8) or the integrated family planning and HIV services (see table 4.12).

Table 4.15 Counselling on family planning

During your counselling today, did the service provider	Frequency	Percentages	Cumulative frequency	Cumulative percentage
Ask the reason for your visit				
Yes	109	77.9	109	77.9
No	31	22.1	140	100.0
Ask about the current method of contraception problems				
Yes	116	82.9	116	82.9
No	24	17.1	140	100.0
Suggest any action(s) to resolve the problem				
Yes	114	81.4	114	81.4
No	26	18.6	140	100.0
Discuss about the reproductive goal or contraception				
Yes	108	77.1	108	77.1
No	32	22.9	140	100

During your counselling today, did the service provider	Frequency	Percentages	Cumulative frequency	Cumulative percentage
Provide information about different family planning methods				
Yes	134	95.7	134	95.7
No	6	4.3	140	100.0
Ask about your family planning or contraceptive preference				
Yes	129	92.1	129	92.1
No	11	7.9	140	100.0
Explain to you the effects that the contraceptives might have				
Yes	133	95	133	95
No	7	5	140	100.0
Talked what to do if any problems with the method you choose today				
Yes	111	79.3	111	79.3
No	29	20.7	140	100.0
Make a follow-up appointment for you so that you know when to return				
Yes	132	94.3	132	94.3
No	8	5.7	140	100.0
Give you printed information on family planning when she/he discuss it with you?				
Yes	14	10	14	10
No	126	90	140	100.0

Table 4.15 presents the key elements of family planning counselling using the GATHER (Greet, Ask, Tell, Help, Explain and Return)/REDI (Rapport building, Exploration, Decision making and Implementation of the decision) framework that should be ensured by service providers (Engender Health 2015). The key elements of counselling were addressed by service providers during service provision that helped the respondents to choose their own family planning methods. Amhawi, Underwood, Murad & Jabre (2013:180-192) emphasise that providing good counselling is an opportunity to enhance quality family planning services.

4.4.2 Opportunities regarding HIV services

Opportunities regarding to HIV services will be described below.

4.4.2.1 Utilization of HIV services (N=403)

Despite the fact that only 243 (N=403) came primarily for HIV services, 319 (f=79.2%) received HIV services at the date of interview that might be due to the counselling service provided by service providers. only 84 (f=20.8%) out of 403 respondents didn't receive HIV services. As illustrated in table 4.16, respondents who received the different kinds of HIV services (n=319) includes a large proportion of clients (F=84; f=26.3%) who received anti-retroviral therapy followed by voluntary HIV testing (F=82; f=25.7%), prevention of mother to child transmission (F=74; f=23.2%), provider initiated HIV testing (F=69; f=21.6%) and voluntary HIV counselling (F=10; f=3.1%).

Table 4.16 Components of HIV services (n=319)

Type of HIV service received	Frequency (F)	Percentage (f)	Cumulative frequency	Cumulative percentage
Anti-retroviral therapy	84	26.3	84	26.3
Voluntary HIV testing	82	25.7	166	52
Prevention of mother to child transmission	74	23.2	240	75.2
Provider initiated HIV testing	69	21.6	309	96.8
Voluntary HIV counselling	10	3.1	319	100.0

4.4.2.2 HIV counselling and testing (N=403)

Almost all of the respondents (F=396; f=98.3%) have been counselled and tested for HIV previously with only 7 (f=1.7%) who have never been counselled and tested for HIV. These findings are similar with the data provided (Central Statistics Authority et al., 2011:231) that indicated that majority of women (86%) had tested for the HIV testing. Respondents who have been counselled and tested (n=396) indicated the reasons why they did HIV counselling and testing. As illustrated in 4.17 a large proportion of clients (F=176; f=44.4%) indicated that the reason for HIV testing was that they were tested during the antenatal care follow-up as part of the care, followed by 110 (f=27.8%) who wanted to know their HIV status, 63 (f=15.9%) said the service providers recommended the test as a routine test for them, 25 (f=6.3%) indicate marriage or having a boyfriend as the reason, 7 (f=1.8%) were exposed to unprotected sexual contact with an HIV positive person, 6 (f=1.5%) feared the risk of STI diagnosis and only 4 (f=1%) said it was due to other medical sickness reason. It is evident in the literature that HIV testing

has been integrated in to the routine antenatal care services to reduce the missed opportunities and increase the utilization (Gunn, Asaolu, Center et al., 2016:20605). It seems that HIV testing is practiced in an integrated fashion in to routine health services and therefore it is an opportunity to enhance the integration of family planning and HIV services as described by Gunn et al. (2016:20605).

Table 4.17 Reasons for HIV testing (n=396)

Reasons for HIV testing	Frequency	Percentage	Cumulative frequency	Cumulative percentage
Exposure due to unprotected sexual contact with an HIV positive person	7	1.8	7	1.8
The risk of STI diagnosis	6	1.5	13	3.3
Due to pregnancy	176	44.4	189	47.7
Because I attended the family planning integrated se	5	1.3	194	49
The service providers recommended the test as a routine test	63	15.9	257	64.9
I wanted to know myself	110	27.8	367	92.7
Marriage reason or having a boy friend	25	6.3	392	99.0
I was sick	4	1	396	100.0

Among previously counselled and tested for HIV counselling and testing (n=396), almost two thirds (F=264; f=66.7%) had HIV negative test results, followed by HIV positive test results (F=125; f=31.6%) and only 7 (f=1.8%) didn't want to disclose their HIV test result. Despite the fact that there were 125 HIV positive clients (f=31.6%) in this study, the adult HIV prevalence of the general population in Ethiopia was 1.5% in 2011 (Central Statistics Authority et al., 2011:231). However; a study done in South Africa the proportion of HIV positive rate was higher among provider initiated HIV counselling and testing attendants who came to the health facilities compared to the general population (Leon, Naidoo, Mathews, Lewin and Lombard 2010:8). When many HIV positive clients visited to the health facility, it is an opportunity to implement an integrated service for person living with HIV (Lambdin, Mbwambo, Josiah & Bruce 2015:19936).

4.4.2.3 Men's involvement (N=403)

Of the respondents, 85.4% (n=338) had disclosed their HIV status to their husbands or partners (see figure 4.8). This concurred with Irani et al. (2015:12) finding that 70% of HIV tested clients disclosed their HIV status to their spouses in Malawi. Wondimagegn & Mekonnen (2013:23) found that this was due to increased awareness of men of the benefits of disclosing HIV test results to their spouses in Ethiopia. Increased involvement of males is an opportunity to improve the utilization of HIV care services (Dunlap, Foderingham, Bussell et al., 2014:109-118). However, in this study, the binary logistic regression indicated that male involvement was not significantly associated with the use of an integrated family planning and HIV services (see table 4.12).

4.4.3 Opportunities regarding family planning and HIV service integration

The respondents' opportunities regarding the integrated family planning and HIV services are described below.

4.4.3.1 Ways of family planning and HIV service integration (n=56)

The respondents identified three (3) ways of offering an integrated family planning and HIV service as opportunities to provide integrated family planning service. Of the respondents, 13.9% (n=56) received integrated family planning and HIV services; 50% (n=28) had received the integrated family planning and HIV service in different rooms with different service providers; 48.2% (n=27) had received integrated family planning and HIV service in the same room with the same provider, and 1.8% (n=1) had received the service in the same room with different service providers (see table 4.19). Offering an integrated service in a single room with the same provider increased utilization rather than integrated family planning and HIV services in different rooms in the same compound or in different facilities (Bradley et al., 2010:1295-1304).

Of the respondents, 79.3% (n=307) preferred to receive the integrated family planning and HIV service in a "one-stop shop" approach; 11.6% (n=45) preferred different rooms and different service providers, and 9% (n=35) preferred to receive the service in the same room with different providers. Of the respondents, 50% (n=28) had received the service in different rooms from different service providers (see table 4.18). People's

preference for a “one-stop shop” approach is an opportunity to consider for the provision of family planning and HIV services at the public health centre level (Bradley et al., 2010:1295-1304).

Table 4.18 Ways of the integrated family planning and HIV services (n=56)

Models of the integrated service	Frequency	Percentage	Cumulative frequency	Cumulative percentage
Different rooms and different service providers	28	50	28	50
Same room and same service provider	27	48.2	55	98.2
Same room and different service providers	1	1.8	56	100.0

4.4.3.2 Respondents’ satisfaction (N=403)

Of the respondents, 53.8% (n=217) were highly satisfied; 32.3% (n=130; f=) were satisfied; 11.2% (n=45) were somewhat satisfied, and 2.7% (n=11) were not satisfied with the service provided on the day of interview. In Tanzania Awadhi, Mboya, Temu & Ngware (2012:6) found that most of the participants were satisfied with the integrated service provided.

Table 4.19 presents the respondents’ factors that positively influenced facilitating the integration of family planning and HIV service at the public health centre. Of the respondents, 54.6% (n=220) indicated a well-equipped facility; 52.9% (n=213) indicated the need to receive integrated family planning and HIV service; 43.2% (n=174) accessibility of the health facility to the village; 34.2% (n=138) indicated free services; 0.5% (n=2) indicated the availability of trained staff; 0.2% (n=1) indicated the increased awareness of the community, and 0.2% (n=1) indicated men’s involvement as factors that influenced utilization of integrated services positively. The binary logistic regression tests indicated client satisfaction was not statistically significant in the use of family planning (see table 4.6) and integrated family planning and HIV services (see table 4.12). In this study, client satisfaction was statistically associated (p=0.034) with HIV testing (see table 4.6). Similar to the finding regarding client satisfaction in this study, it is evident in the literature that high level client satisfaction due to positive staff attitude

was significantly associated with HIV testing (Matseke, Peltzer & Mohlabane 2016:1173).

Table 4.19 Respondents' positive contributing factors of family planning and HIV service integration (N=403)

Positive contributing factors of family planning and HIV service integration	Frequency	Percentage
Facility set-up is well equipped	220	54.6
Clients want to get an integrated FP and HIV service	213	52.9
Facility is more accessible to our village	174	43.2
Family planning and HIV services are given free of charge at the health centre	138	34.2
Trained human resources	2	0.5
Increase awareness of the community	1	0.2
Men's involvement	1	0.2

Table 4.20 presents the themes and categories from the respondents' answers. Four themes were identified to improve the integration of family planning and HIV services at the public health centre level: resources, capacity building, service provision and men's involvement. The categories of resources were infrastructure, fiscal resources, medical resources and human resources. The categories of capacity building were clients and service providers. Service provision had three categories: access to an integrated family planning and HIV service; availably of an integrated family planning and HIV service, and quality of services.

Table 4.20 Respondents' suggestions to improve the integrated family planning and HIV service at the public health centre level

Theme	Categories	Direct statements
Resources	Infrastructure	• Make the rooms with wider space, clean and comfortable • I suggest repairing the infrastructure of the public health centre • Constructing additional rooms for family planning and HIV integration services
	Fiscal resources	• Allocate money available for integrated family planning and HIV services
	Medical resources	• Prevent the shortage of contraceptives and HIV test kits

Theme	Categories	Direct statements
		• My suggestion is ensure enough supply of drugs and contraceptives
	Human resources	• Hire a sufficient number of qualified/trained service providers • Recruit additional service providers for family planning and HIV services is one of my suggestions • I propose that service providers get rewards and incentives
Capacity building	Service providers	• Provide training for service providers on integrated family planning and HIV services • Organize refresher training for service providers
	Clients	• Teach the community about HIV testing and family planning/contraceptive use • Educate clients to use social media • Teaching clients through a house-to-house strategy might be helpful • Create awareness of long-term family planning service
Service provision	Access to an integrated family planning and HIV services	• Expanding HIV testing will promote an integrated family planning and HIV services. • I suggest to increase access to family planning service for HIV positive women • Arrange to provide an integrated family planning and HIV services in weekends to improve access
	Availability of an integrated family planning and HIV service	• My suggestion is offering HIV services in every family planning room • Family planning service in ART room must be provided without interruption • I suggest that the availability of both services in an integrated fashion is very important
	Quality of service	• Better quality of service will enhance integrated family planning and HIV services. • Improve the quality of counselling service as a way to improve integrated family planning and HIV services • Quality of service is essential to keep the privacy and confidentiality of clients as it has positive implications for the integrated family planning and HIV services
Men's involvement	Improve men's involvement	• I encourage men's involvement • I suggest that men make use of available male contraceptives such as male condom

4.5 SERVICE PROVIDER RESPONDENTS (N=305)

4.5.1 Respondents' biographical profile

4.5.1.1 Distribution of service providers by public health centres (N=305)

Of the respondents, 4.9% (n=15) were from the Yeka public health centre and 4.6% (n=14) from the Addisugebyia public health centre. The Yeka public health centre has the highest number of service providers and therefore the maximum number of service providers was sampled in the study and the lowest numbers of service providers were from Dilfire, Miychew and Addis Hiwot public health centres (2.3%; n=7, respectively). In 2014 a large number of service providers were assigned to provide family planning and/or HIV services at Yeka public health centre (Addis Ababa Health Bureau report, 2014).

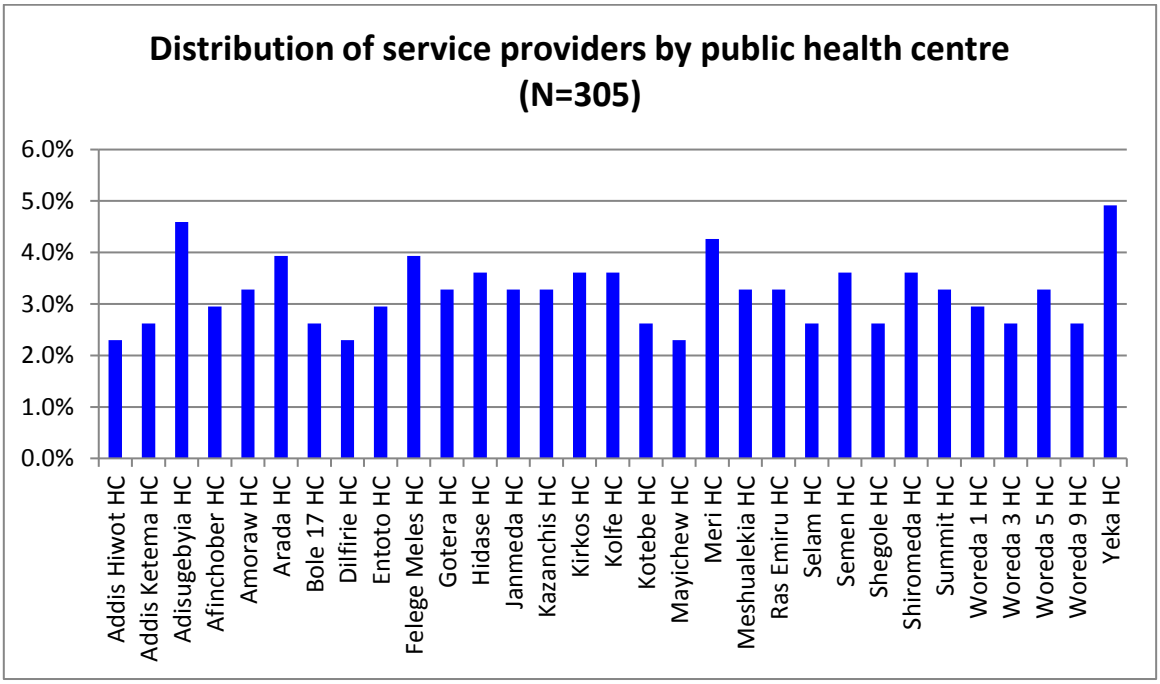

Figure 4.10 Distribution of service providers by public health centre (N=305)

4.5.1.2 Distribution of respondents (N=305)

Various service providers who were working in family planning and/or HIV services at the time of data collection participated in the study. Figure 4.11 indicates that of the

respondents, 56.7% (n=173) were clinical nurses; 27.2% (n=83) were midwifery nurses; 14.4% (n=44) were public health officers, and 1.6% (n=5) were physicians. The majority of the respondents were clinical nurses. Chapter 3, section 3.7 indicates that 50% of all the service providers were randomly selected to participate in the study from each category.

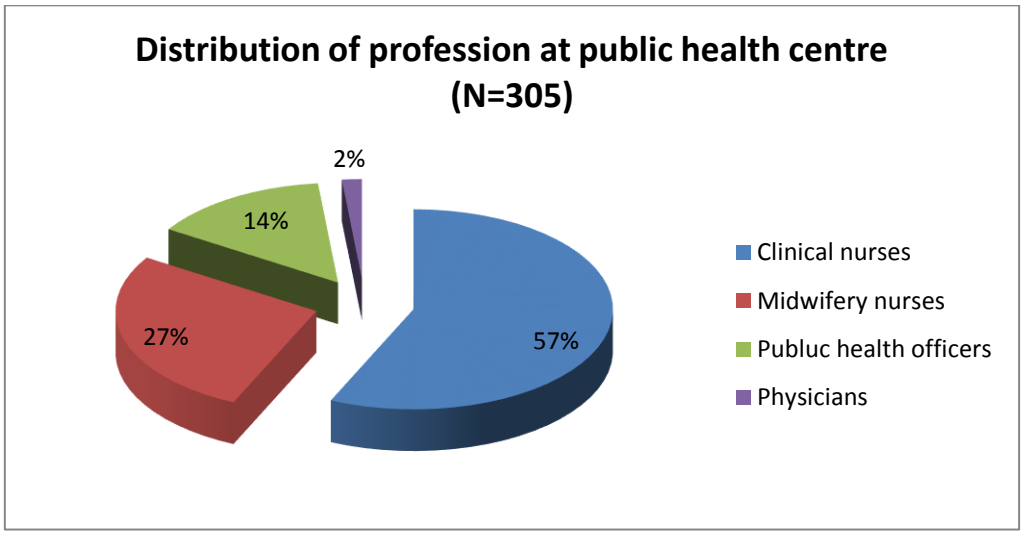

Figure 4.11 Respondents' distribution by profession (N=305)

4.5.1.3 Education (N=305)

Of the respondents, 66.2% (n=202) had a diploma as highest level of education; 33.4% (n=102) had a Bachelor's degree, and 0.4% (n=1) had completed a master's degree (see figure 4.12).

These findings correlate with the Ethiopian Ministry of Health's (MOH Ethiopia 2015a:59) report that the majority of service providers (82,115) had diplomas as the highest level of education and 13,811 had a degree. The Ethiopian Ministry of Health worked with the ministry of education and the Carter Center in developing a training programme called the accelerated public health training initiative (APHTI) to upgrade diploma nurses and midwives to degree level in different colleges and universities in the country (Alebachew & Waddington 2015:13-15).

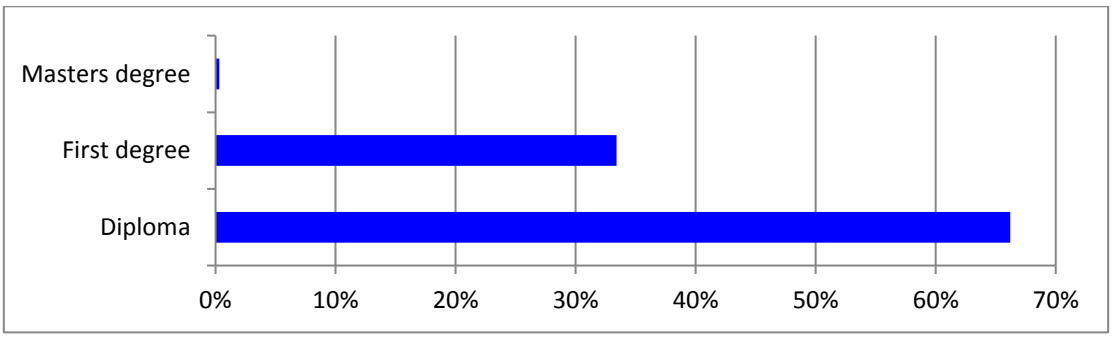

Figure 4.12 Respondents' educational qualifications (N=305)

4.5.1.4 Gender (N=305)

Figure 4.13 indicates that of the respondents, 65.2% (n=199) were females and 34.8% (n=106) were males. In Addis Ababa and the country as a whole, females are the dominant service providers at the public health centre level (World Bank 2012:5). In Tanzania, the majority of service providers (66.5%) are also females (MOH Tanzania 2013: 16). Kirimlioglu & Sayligil (2016:31) found that most clients preferred to visit female service providers for family planning and HIV services and satisfying client preferences improved access to services.

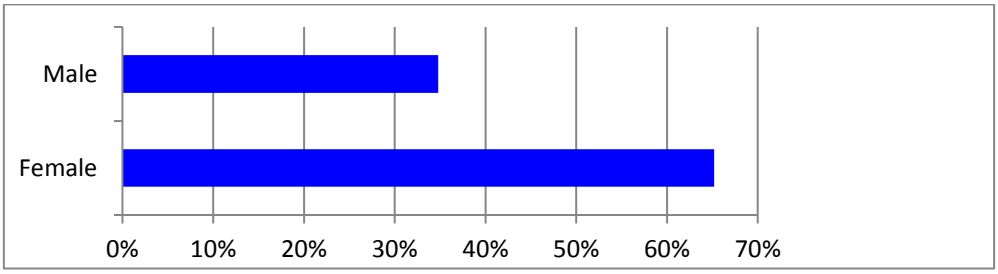

Figure 4.13 Respondents' gender (N=305)

4.5.1.5 Age (N=305)

The mean age of the respondents was 27.6 years. Table 4.21 shows that of the respondents, 46.2% (n=141) were in the age group of 26-30 and 37.7% (n=115) were 21-25 years old. This concurred with Asegid, Belachew & Yimam's (2014:10) finding that the majority of nurses and midwives were in the age group of 20-30 years. The majority of service providers are young which might promote and facilitate implementing the integration of family planning and HIV services.

Table 4.21 Respondents' age groups (N=305)

Age group	Frequency	Percentage	Cumulative frequency	Cumulative percentage
18-20	1	0.3	1	0.3
21-25	115	37.7	116	38
26-30	141	46.2	257	84.2
31-35	25	8.2	282	92.4
36-40	14	4.6	296	97
41-45	4	1.3	300	98.3
46-50	4	1.3	304	99.6
56-60	1	0.3	305	100.0

4.5.1.6 Marital status (N=305)

Figure 4.14 indicates that of the respondents, 55.1% (n=168) were single; 41.6% (n=127) were married; 2% (n=6) were divorced, and 1.3% (n=4) were widowed. In a study in Ethiopia, Asegid et al., (2014:10) found that of the nurses and midwives who participated, 54.1% were single and 44.2% were married.

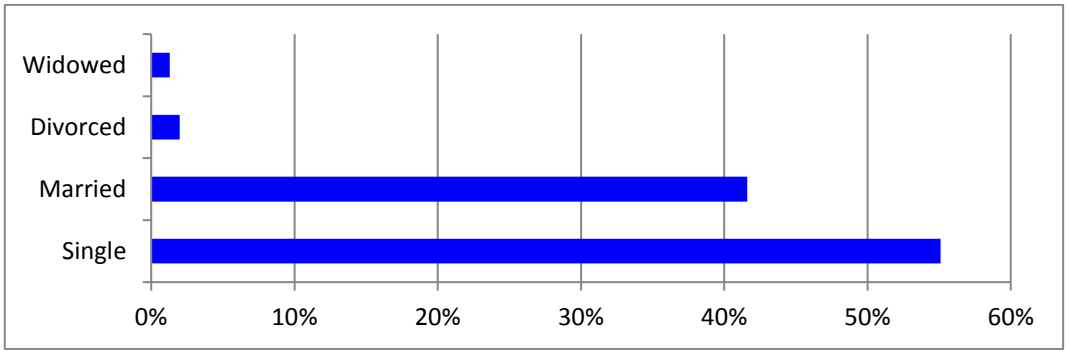

Figure 4.14 Respondents' marital status (N=305)

4.5.1.7 Religion (N=305)

Of the respondents, 75.1% (n=229) were Orthodox Christians; 16.1% (n=49) were Protestants; 7.5% (n=23) were Muslims, and 1.3% (n=4) were Catholics (see table 4.22). These results correlate with Adraro & Mengistu's (2015:21) finding in Ethiopia that of the nurse participants, 63% were Orthodox; 25.4% were Protestant; 9.4% were Muslim, and 2.2% were Catholic. A study in Swaziland found that the service providers reported that contraceptive use was against their religion and this had negative influence on service provision (Jonas, Crutzen, Van den Borne & Reddy 2017:86).

Table 4.22 Respondents' religion (N=305)

Religion	Frequency	Percentage	Cumulative frequency	Cumulative percentage
Orthodox	229	75.1	229	75.1
Protestant	49	16.1	278	91.2
Muslim	23	7.5	301	98.7
Catholic	4	1.3	305	100.0

4.5.1.8 Current position (N=305)

Table 4.23 indicates that of the respondents, 89.5% (n=273) did not have a managerial position at the public health centre therefore they might have enough working time for service provision. Of the respondents, 10.5% (n=32) had a managerial position, but also had to provide a service; 7.2% (n=22) were case managers and 3.3% (n=10) were head nurses. Nurses who have management positions have a shortage of time to provide quality service (Armstrong, Rispel & Penn-Kekana 2015:26243).

Table 4.23 Respondents' current positions (N=305)

Position	Frequency	Percentage	Cumulative frequency	Cumulative percentage
Head nurses	10	3.3	10	3.3
Process owner/case manager	22	7.2	32	10.5
Service providers	273	89.5	305	100.0

4.5.1.9 Work experience in years (N=305)

The respondents' work experience is discussed below.

4.5.1.9.1 Respondents' total work experience in years (N=305)

The respondents' mean years of work experience was 4.6 years. Figure 4.15 illustrates that of the respondents, 65.2% (n=199) had 5 and less years' experience; 27.2% (n=83) had 5-10 years' experience; 3.9% (n=12) had 10-15 years' experience, and 3.6% (n=11) had more than 15 years' work experience. Service providers are required to have

adequate skills and experience to provide services (McHugh & Lake 2010:276). In this study, of the respondents, 65.2% (n=199) had less than 5 years' experience, which might therefore be a challenge to facilitating the implementation of the integrated services (Workneh, Bjune & Yimer 2016:135). However, the binary logistic regression indicated that the respondents' work experience was not a statistically significant factor associated with the involvement of provision of integrated family planning and HIV services (see table 4.32). However, the quality of the service was not determined and might still be a factor.

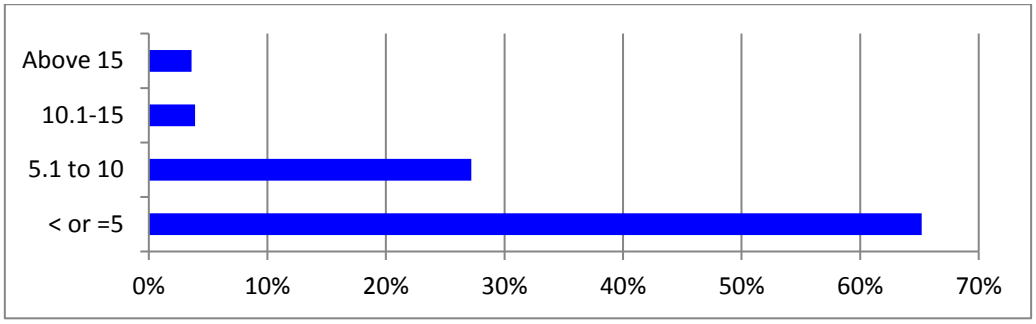

Figure 4.15 Respondents' total work experience (N=305)

4.5.1.9.2 Years' work experience in family planning service provision (N=305)

The respondents' mean years of family planning work experience was 1.7 years. Of the respondents, 90.5% (n=276) had 2 or less than 2 years' experience; 7.9% (n=24) had 2.1 to 4 years', and 1.6% (n=5) had more than 4 years' experience in family planning service provision. Service providers must have adequate skills and experience to provide quality services (McHugh & Lake 2010:276). Of the respondents, 91% (n=276) had little experience in family planning (see table 4.24). Lack of experience by service providers is a challenge to facilitating the implementation of integrated services (Workneh et al., 2016:135).

Table 4.24 Respondents' family planning work experience (N=305)

Family planning work experience	Frequency	Percentage	Cumulative frequency	Cumulative percentage
≤2	276	90.5	276	90.5
2.1-4.0	24	7.9	300	98.4
>4	5	1.6	305	100.0

4.5.1.9.3 Respondents' years' work experience in HIV service provision (N=305)

The respondents' mean years of work experience in HIV services was 1.5 years. Of the respondents, 78.7% (n=240) had less than 2 years' experience; 15.4% (n=47) had 2.1 to 4 years' experience, and 5.9% (n=18) had more than 4 years' work experience in HIV service provision. Regarding health care providers' views on HIV and AIDS service in Tanzania, Mwambetania et al. (2014:8) found that the majority of service providers had over 2 years' experience in HIV-related service. The respondents' limited experience in providing HIV service could have a negative influence on the quality of HIV services. Workneh et al. (2016:135) point out that limited experience of service providers could be challenging in the implementation of an integrated service.

Table 4.25 Respondents' HIV work experience (N=305)

HIV work experience	Frequency	Percentage	Cumulative frequency	Cumulative percentage
≤2	240	78.7	240	78.7
2.1-4.0	47	15.4	287	94.1
>4	18	5.9	305	100.0

4.6 RESPONDENTS' CHALLENGES IDENTIFIED (OUTPUTS)

This section discusses the respondents' outputs on challenges regarding family planning, HIV services and integrated family planning and HIV services. Of the respondents, 31.1% (n=95) worked in family planning services (see section 4.6.1 and 4.7.1) and 68.9% (n=210) worked in HIV services (ART, HIV counselling & testing services) (see section 4.6.2 and 4.7.2). All the respondents (N=305) answered all the questions related to integrated family planning and HIV services (see section 4.6.3 and 4.7.3).

4.6.1 Challenges regarding family planning services

The respondents' challenges regarding family planning service are described below.

4.6.1.1 Challenges for the utilization of family planning service (n=95)

Of the respondents, 86.3% (F=82) were of the opinion that a lack of knowledge is the main challenge for clients to not use family planning service; 73.7% (n=70) indicated fear of side effects; 56.8% (n=54) indicated women's decision-making powers; 51.6% (n=49) indicated cultural beliefs; 5.3% (n=5) indicated lack of contraceptive options; 3.2% (n=3) indicated male partner's or husband's opposition, and 3.2% (n=3) indicated shortage of human resource (see figure 4.16).

A lack of knowledge is a major contributing factor in the utilization of family planning services (Ibrahim, Rabiu & Abubakar 2015:90-94). The fear of side effects and poor management of side effects also have a negative impact (Ibrahim et al., 2015:90-94; Orach, Otim, Aporomon et al., 2015:24). Little or no promotion of the use family planning is also a challenge for the implementation of integrated services (USAID 2014:17-22).

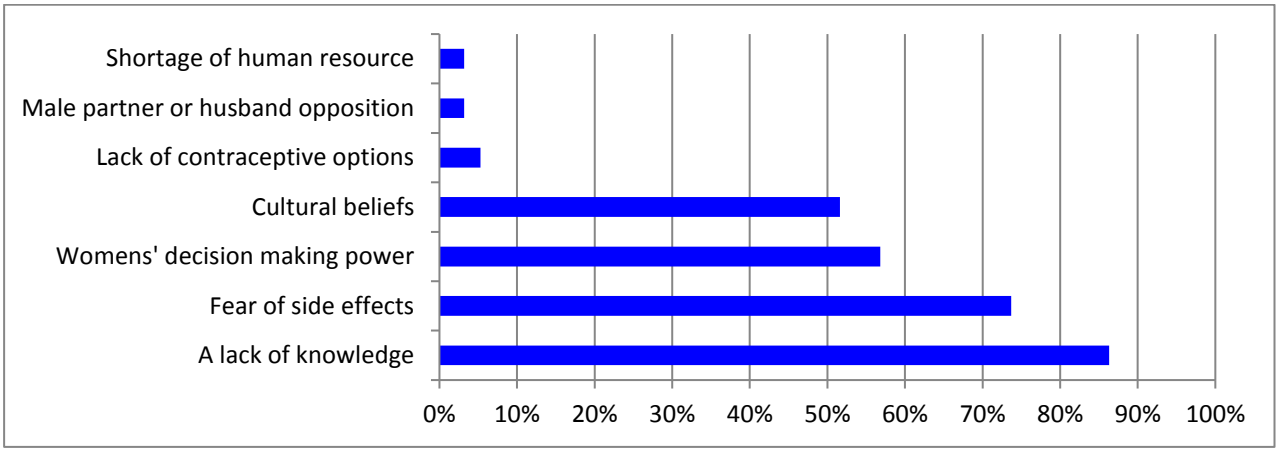

Figure 4.16 Challenges for non-use family planning service (n=95)

Of the respondents, 84.2% (n=80) had treated clients with side effects of family planning methods, while 15.8% (n=15) had not treated clients with side effects.

Of the respondents who treated side effects, 96.3% (n=77) had treated irregular bleeding; 72.5% (n=58) indicated weight gain; 30% (n=24) indicated nausea; 5% (n=4) indicated weight loss; 3.8% (n=3) indicated drowsiness; 2.5% (n=2) indicated headaches; 1.3% (n=1) indicated mood changes, and 1.3% (n=1) indicated back pain (see figure 4.17).

The most common side effects of family planning methods are irregular bleeding, nausea, weight gain/loss and headaches (Center for Young Women's Health 2016). According to the WHO (2011), these side effects are mainly experienced when pills and injectable family planning methods are used. The side effects experienced could be due to the high number of injectables and pills used (Central Statistic Authority & ICF International 2011:95). Side effects must be addressed by service providers properly to facilitate the implementation of integrated services (Orach et al., 2015:24).

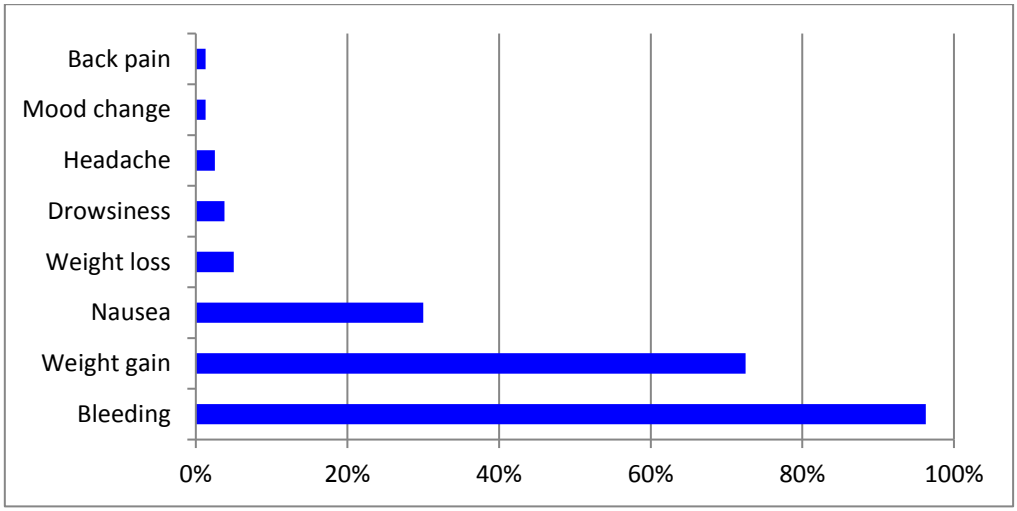

Figure 4.17 Respondents' common side effects of contraceptive methods treated (n=80)

Of the respondents, 94.7% (n=90) offered counselling to clients, and 41.1% (n=39) also gave written pamphlets after counselling about family planning methods. The respondents did not provide printed behavioural change communication (BCC) materials about family planning, however, which could be a challenge as effective communication is needed for implementation of the integrated service.

Of the respondents, 52.6% (n=50) indicated that clients reported receiving male support for the use of family planning service at the public health facilities. Male involvement in family planning has a positive influence on the use of family planning by clients (Tilahun et al., 2014:3-8). Although the study did not focus on the male condom as a family planning method, Kassa, Abajobir & Gedefaw (2014:33) emphasise that it is important to encourage men to use male condoms for family planning. Kabagenyi, Jennings, Reid

et al. (2014:21) found that the use of male condoms as a family planning method was low in Uganda and other African countries.

4.6.1.2 Human resources (n=95)

Service providers need to be competent and trained to offer quality of family planning service (Yigzaw et al., 2015:130).

Of the respondents, 38.9% (n=37) had not attended any family planning training in the past two years, while 23% had attended in-service training on family planning in Kenya (Measurement, Learning and Evaluation Project 2013:3). It is important to offer effective integrated service training of service providers is UNFPA (2015).

The respondents who had not attended any training were asked to give reasons for not attending family planning training (37 respondents responded). Table 4.26 presents the reasons given, namely a lack of management and resources. Lack of management had three categories, namely selection criteria of trainees, communication, and service providers' experience.

Table 4.26 Respondents' reasons for the lack of training in family planning

Reason	Categories	Direct statements
A lack of management	Selection criteria	• The selection criterion was a lottery method that resulted in inappropriate nomination of service providers for the training
	Communication	• I missed the training because I was not aware of it • I lacked clarity on the selection of service providers for the training
	Service providers' experience	• I was newly recruited for the position and there was no chance of getting the training during my little experience in the health centre • I had many years of experience in family planning service provision and no need for more training
Resources	Fiscal resources	• Shortage of budget may be one of the reasons • A lack of funding from development partners' involvement to provide the training might be the reason

4.6.1.3 Family planning methods (n=95)

Of the respondents, 30.5% (n=29) indicated that there was a poor supply chain system at public health centre level and 24.2% (n=23) indicated that some family planning methods were unavailable at the public health centres.

Of the respondents, 34.8% (n=8) indicated a shortage of Sino-implants; 26.1% (n=6) indicated a shortage of IUCDs; 21.7% (n=5) indicated a shortage of Implanon; 8.7% (n=2) had a shortage of progestin only pills; 4.3% (n=1) had a shortage of Jadelle, and 4.3% (n=1) indicated a shortage of depo provera (see table 4.18).

In Kenya the most common type of family planning methods that were out of stock were male condoms (60%), injectables (47%), implants (14%), IUDs (13%) and pills (13%) (Measurement, Learning and Evaluation Project in Kenya [MLE] 2013:2). Similar shortages of family planning commodities were found in Senegal (Daff et al., 2014:245-252). Problems with the distribution of family planning methods or ineffective logistic systems also cause challenges (USAID 2012b). Mekonnen & Worku (2011:37) found that the unavailability of family planning commodities were a challenge when the services are offered.

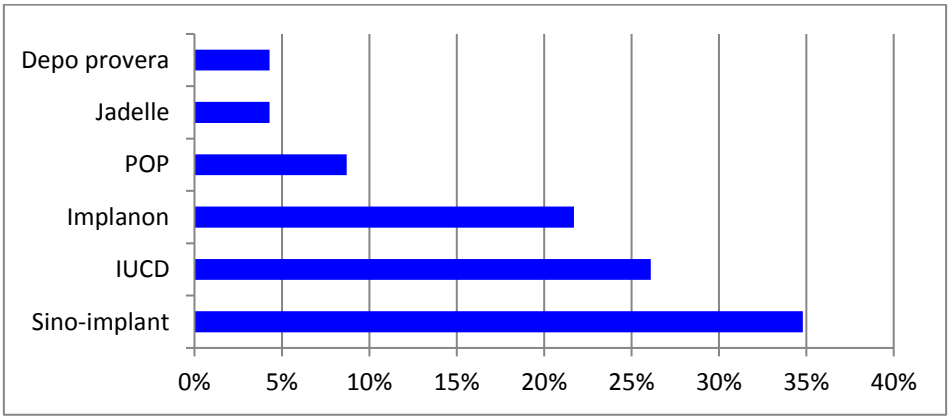

Figure 4.18 Types of contraceptives out of stock in the past 6 months (n=23)

4.6.1.4 Policies, strategies and guidelines (n=95)

Of the respondents, 40% (n=39) were not aware of the availability of family planning related policies, strategies and guidelines. Of the respondents who were aware of the availability of family planning-related policies, strategies and guidelines, 30.4% (n=17)

answered that at least three of the six types of policies, strategies and guidelines were available (see section 2.3.8) and 69.6% (n=39) answered that only one or two types of policies, strategies and guidelines were available in their public health centres.

Of the respondents who were aware of the available family planning policies, strategies and guidelines in their public health centres, 100% (n=56) utilized the available policies, strategies and guidelines as a reference for family planning service practice. In Uganda, Nabyonga Orem, Bataringaya Wavamunno, Bakeera & Criel (2012:98) found that most of developed guidelines (60%) were not available at the health facility level. The implementation of the integrated services would rely on the availability of guidelines within the facilities.

The respondents who were not aware of the availability of family planning-related policies, strategies and guidelines were asked to give reasons for their answer. The respondents gave two reasons, communication and budget constraints that negatively impact on the availability of policies, strategies and guidelines (see table 4.27).

Table 4.27 Respondents' reasons for unavailability of policies, strategies and guidelines

Reason	Direct statements
Communication	• I do not know where it is found • I did not know that all the training guidelines should be kept at the public health centre after the training
Budget constraints	• Shortage of budget for printing was one of the reasons for the unavailability of policies, strategies and guidelines • There were not enough copies of policies, strategies and guidelines because of the budget constraints

4.6.2 Respondents' challenges regarding HIV/AIDS services (outputs)

This section describes the respondents' challenges regarding HIV services.

4.6.2.1 Utilisation of HIV services (HIV counselling, testing and ART service) (n=210)

Of the respondents, 8.6% (n=18) indicated that they did not utilize the HIV counselling and testing services as they were not always available because of a shortage of HIV test kits (see figure 4.20). In Tanzania 13% of service providers did not offer HIV counselling and testing services at the health facilities (Mwambetania et al., 2014:7). Gedif & Birehanemeskel (2014:1) found that a shortage of HIV test kits was one of the reasons why HIV counselling and testing services were not always available in Ethiopia. A shortage of HIV test kits could pose a challenge to facilitating the implementation of integrated services.

Of the respondents, 44.8% (n=94)) indicated that a lack of awareness of clients of the availability of ART was one of the challenges in providing a HIIV counselling and testing service. Ineffective promotion and communication regarding the availability of ART could inhibit the uptake of HIV counselling and testing services (Desclaux et al., 2014:27). A lack of information on the linkage between HIV counselling and testing and antiretroviral therapy was a challenge in the implementation of the integrated family planning and HIV services (Gerdts, Wagenaar, Micek et al., 2014:e37-e44).

The respondents who indicated that the HIV counselling and testing services were not always available at the public health centres were asked to give the reasons that HIV services were sometimes interrupted. The two themes identified after open coding were service delivery and resources. Table 4.28 presents the reasons and categories. Service delivery consisted of service packages and working hours, and resources consisted of medical resources and competent human resources.

Table 4.28 Reasons for interruptions in HIV services

Theme	Categories	Direct statements
Service delivery	Service packages	• ART service has not yet started at the public health centre. • The public health centre is newly constructed and does not provide all HIV services.
	Working hours	• The service is not given on weekends. • The service is not offered at night.
Resources	Medical resources	• Shortage of HIV test kits is one of the reasons • I guess shortage of ART drugs is one of the reasons • Shortage of contraceptives
	Competent human resources	• A lack of trained service providers to provide ART services might be the reason • I think a lack of trained manpower in the integrated family planning and HIV services is one of the reasons

The respondents (n=210) were asked to indicate the challenges experienced regarding ART services at the public health centre level and could indicate all relevant challenges listed in the questionnaire. Of the respondents, 76.7% (n=161) indicated poor adherence to ART drugs; 34.8% (n=73) indicated a lack of private sector involvement; 22.9% (n=48) indicated poor quality of service; 17.1% (n=36) indicated low accessibility of ART service; 13.3% (n=28) indicated ART drug stock out, and 2.9% (n=6) indicated "Other" (see figure 4.19). Similar challenges were found in Uganda (Burua, Nuwaha & Waiswa 2013:521) and Nigeria (USAID 2014:2).

These challenges can impact on successful implementation of ART services and need to be addressed.

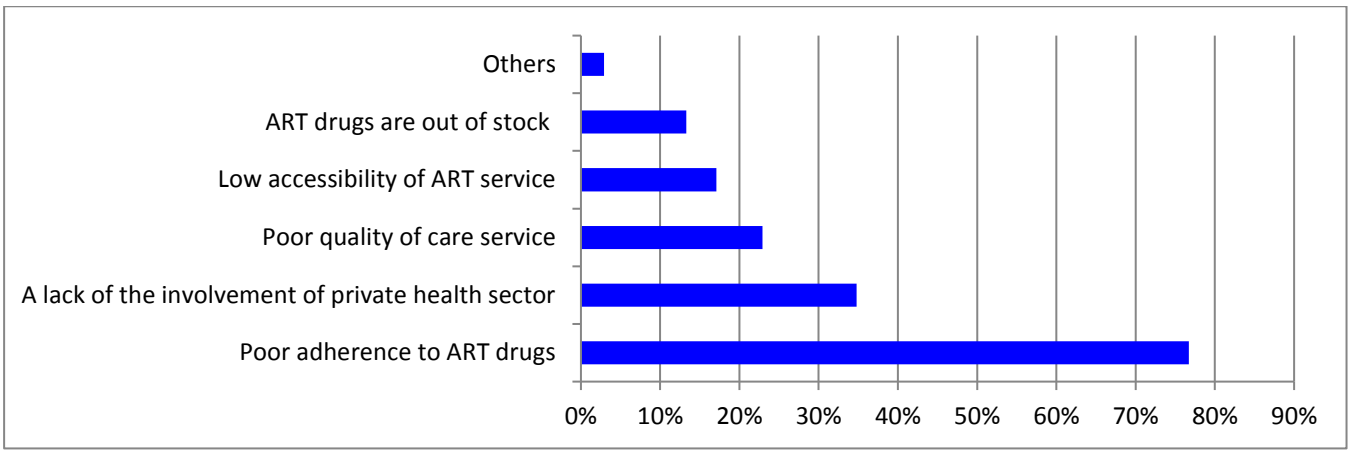

Figure 4.19 Challenges of ART service

The respondents were asked to indicate the reasons for low utilization of condoms. Of the respondents, 59.5% (n=125) indicated cultural barriers; 57.6% (n=12) indicated low decision-making powers of women; 35.2% (n=74) indicated literacy level; 27.1% (n=57) indicated disclosure of HIV status to partner; 21.4% (n=45) indicated having regular heterosexual partners, and 1.4% (n=4) indicated reduced sexual excitation as reasons. In Cambodia Ndabarora & Mchunu (2014:202-210) found similar reasons for not using condoms. The low utilization of condoms negatively affects HIV prevention and can be a challenge to the implementation of integrated services, particularly a dual protection of pregnancy and HIV (UNAIDS 2014).

4.6.2.2 Human resources (n=210)

The number of human resources available and their competencies are crucial in the provision of quality and effective service delivery.

Of the respondents, 27.6% (n=58) indicated that the shortage of service providers was one of the challenges that prevent the enhancement of HIV service delivery. The shortage of nurses and other healthcare providers is of global concern with a negative impact on health care as well as HIV services and a challenge to the implementation of integrated services (UN 2015b; Mwambetania et al., 2014:11).

Of the respondents, 28.1% (n=59) indicated that the shortage of competent counsellors was another challenge that needs to be addressed (see figure 4.20). It is of concern that of the respondents 39.5% (n=83) did not attend any HIV-related training. In an

assessment of nurses' training, competency, and practice in HIV care and treatment in Kenya, Smith, Odera, Chege, Muigai et al. (2016:324) reported similar findings.

The respondents who did not attend HIV-related training were asked to give the reasons. The reasons were similar to those given for family planning service (see section 4.6.1.2). The reasons given were management and training (see table 4.29). The categories identified for management were communication, selection criterion and experience.

Table 4.29 Respondents' reasons for the lack of training in HIV

Reason	Categories	Direct statements
Management	Communication	• The notification of training opportunities was too late for me • I do not know the selection criteria • I went for other commitments during the training time • I lack clarity on the selection of service providers for the training
	Selection criterion	• I guess the selection used a lottery method
	Experience	• I was newly hired staff for the position during the selection of the training • I have no HIV service-related activities in the health centre because it is new health centre
Training	Availability of training opportunities	• I do not get a chance • The training opportunity is only given for a few departments compared to the training need • HIV-related training courses are rare opportunities because of the shortage of funding • The training opportunity is usually given only for the focal persons, not to all service providers • No regular training given to all service providers

4.6.2.3 Medical resources (n=210)

Of the respondents, 24.8% (n=52) indicated that one of the main challenges of HIV service provision was a shortage of ART. Assessments of HIV/AIDS-related

commodities supply chain management in Ethiopia and Tanzania found a shortage of ART a serious challenge to service delivery (Nyogea, Said, Mwaigomole et al., 2015:1-9; Berhanemeskel et al., 2016:11).

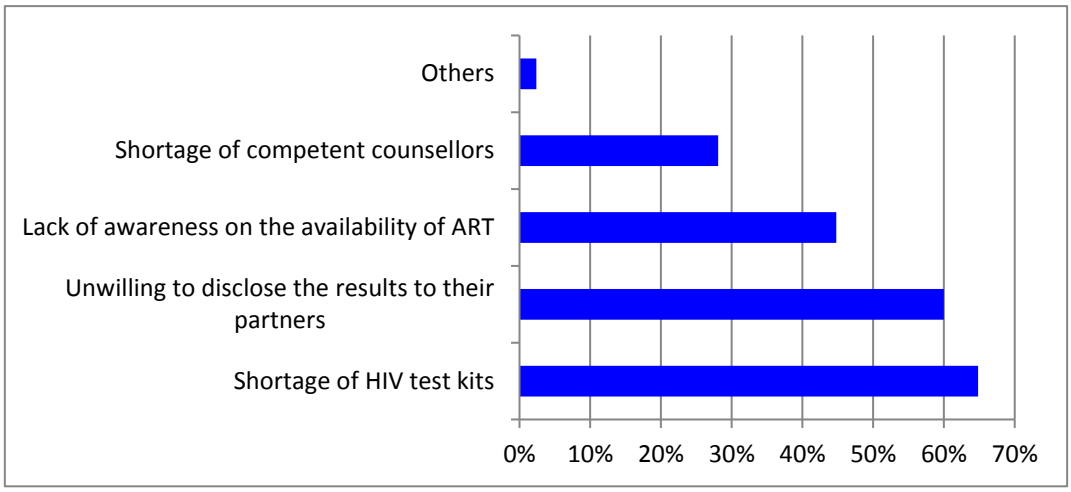

Figure 4.20 Challenges of HIV counselling and testing (n=210)

4.6.2.4 Infrastructure (n=210)

Of the respondents, 17.6% (n=37) indicated that a lack of adequate infrastructure was a challenge to offering HIV service. Inadequate infrastructure is a challenge to the implementation of any service, including integrated services (WHO 2012a) and needs to be addressed in a strategic plan to facilitate implementation.

4.6.2.5 Policies, strategies and guidelines (n=210)

Of the respondents, 44.8% (n=94) were not aware of the availability of HIV/AIDS-related policies, strategies and guidelines while 55.2% (=116) were. Service providers are sometimes not aware of HIV-related guidelines (Adamchak et al., 2011:41). This impacts on how they implement the prescribed guidelines and policies pertaining to a specific service.

The respondents who were aware of the availability of HIV/AIDS-related policies, strategies and guidelines (n=116) were asked to name all available HIV/AIDS-related policies, strategies and guidelines (see section 2.4.9 and 4.7.2.3); Of the respondents, 74.1% (n=86) indicated that all kinds of HIV/AIDS-related policies, strategies and guidelines were available at public health centre level and 25.9% (n=30) indicated that

the only some policies, strategies and guidelines were available at the public health centre.

The respondents gave three reasons for the availability of some of the policies, namely communication, resources, and monitoring and supervision. The resources were fiscal and medical resources.

Table 4.30 Respondents' reasons for availability of some policies, strategies and guidelines at the public health centres

Reason	Categories	Direct statements
Communication	Lack of communication	• I was not aware where the guidelines are available • I did not know that the training guidelines should be kept at the public health centre after training • I was not informed
Resources	Fiscal resources	• Shortage of budget for printing is one of the reasons
	Medical resources	• A lack of photocopy machine to duplicate policies, strategies and guideline is one of the reasons • No supply of toner for photocopy machine to copy the policies, strategies and guideline might be the reason to distribute it to the public health centre
Monitoring and supervision	Lack of monitoring and supervision	• A lack of supportive supervision from the sub city is one of the reasons • No frequent monitoring and supervision visits to the public health centres by sub city health offices

4.6.3 Challenges regarding the integrated family planning and HIV services (outputs)

4.6.3.1 Family planning and HIV integration (N=305)

Of the respondents, f=26.6% (F=81;) indicated that poor counselling services were the main challenge to offering integrated family planning and HIV services. Effective implementation of an integrated service requires service providers that can offer counselling services to all the clients (O'Reilly, Kennedy, Fonner & Sweat 2013:935). A

high workload of service providers can negatively impact on counselling services (Cooper et al., 2015:217). A lack of competent service providers to provide counselling negatively impacts on the implementation of an integrated family planning and HIV service, although the same service providers can be utilized for both services (Uebel et al., 2013:171).

4.6.3.2 Human resources (N=305)

Adequately trained service providers available at all services are essential to offer an integrated service (Yigzaw et al., 2015:130).

Of the respondents, 42% (n=189) indicated that they did not experience a shortage of service providers and 38% (=116) felt that there was a shortage of service providers. In Sub-Saharan Africa, Hope, Kendall, Langer & Bärnighausen (2014:S259-S270) found that staff shortages challenged service provision. Cooper et al. (2015:217) emphasise that a shortage of staff negatively impacts on the utilization of a service. The significance testing using the binary logistic regression confirmed that a shortage of human resources was not a statistically significant challenge associated with provision of integrated family planning and HIV services (see table 4.32).

Training of service providers to be competent is important to sustain a quality integrated service (Uebel et al., 2013:171). In this study, only 19.3% (n=59) of the respondents attended training sessions related to integrated family planning and HIV service delivery. In this study, the binary logistic regression tests indicated that training in family planning and HIV integration (p=0.033) was a statistically significant factor associated with the provision of integrated family planning and HIV services (see table 4.32). The reasons for not attending training were similar to those in section 4.6.2.2.2 (see table 4.9).

4.6.3.3 Medical resources (N=305)

Of the respondents, 38.7% (n=118) identified a shortage of drugs as one of the challenges that can affect the provision of integrated family planning and HIV services at the public health centre level while 61.3% (n=187) did not. When drugs or medical commodities are out of stock or unavailable it impacts negatively on service provision

such as integrated family planning and HIV services (An, George, LeFevre et al., 2015:451). Factors such as an effective logistic system to order the correct type and number of commodities will ensure an uninterrupted service and thus quality of care (WHO 2016a) The statistical significance testing using binary logistic regression did not indicate that medical resources was statistically significantly associated with provision of integrated family planning and HIV services (see table 4.32).

4.6.3.4 Fiscal resources (N=305)

Of the respondents, 22% (n=67) indicated that inadequate budget allocation was one of the challenges to integrated family planning and HIV services at the public health centre level while 78% (n=268) indicated that fiscal resources were not a challenge. The main source of funding is largely dependent on donations due to limited budget allocation (14%) from the government in developing countries (MOH Ethiopia 2014a:13). A lack of suitable funding has a negative effect on improving integrated family planning and HIV services and requires attention by decision makers to facilitate the integrated services (WHO 2012a). Binary logistic regression found that fiscal resources were not a statistically significant challenge associated with provision of integrated family planning and HIV services (see table 4.32).

4.6.3.5 Infrastructure (N=305)

Of the respondents, 30.2% (n=92) indicated that inadequate infrastructure was a challenge for the integration of family planning and HIV services while 69.8% (n=213) indicated that inadequate infrastructure was not a challenge. A study in Malawi found that some health facilities had sub standardized infrastructure, like insufficient physical rooms to offer integrated family planning and HIV services (Irani et al., 2015:8). Inadequate infrastructure may be due to a lack of adequate funding (Bradley et al., 2008:1295-1304). The binary logistic regression tests revealed a significant relationship between the availability of transportation as part of infrastructure (p=0.044) and the provision of integrated family planning and HIV services (see table 4.32).

4.6.3.6 Strategies, polices and guidelines for integrated family planning and HIV/AIDS service provision (N=305)

Of the respondents, 70.2% (n=214) were not aware of the availability of integrated family planning and HIV strategies and 29.8% (n=91) were aware of the availability of family planning and HIV service integration guidelines.

The respondents who were aware of the availability of integrated family planning and HIV strategies and guidelines indicated the different kinds of strategies and guidelines. Of the respondents, 59.3% (n=54) were aware of the National HIV/AIDs strategy; 20.9% (n=19) were aware of the national PMTCT strategy; 11% (n=10) were aware of the global family planning and HIV integration strategies, and 8.8% (n=8) were aware of the National reproductive health strategy (see table 4.31). Lyatuu (2012:15) found that a lack of guidelines had negative effect for the implementation of an integrated family planning and HIV services. In this study, the binary logistic regression test indicated that the availability of polices and guidelines was not statistically significant for the provision of family planning and HIV services (see table 4.32). However, the respondents' awareness of the family planning policies and guidelines (p=0.049) and Family planning and HIV integration policies and guideline (p=0.003) were statistically significantly associated challenges for the provision of integrated family planning and HIV services (see table 4.32). However, further analysis of the variables using multiple logistic regression and the awareness of the family planning and HIV integration policies/guideline was found to be a significant predictor for the provision of integrated family planning with p=0.028 (AOR=2.359, 95%CI=1.096,5.074). This can be interpreted as a two times higher risk for lack of awareness of the family planning and HIV integration policies/guideline compared to awareness of the guidelines (see table 4.32).

There is no national family planning and HIV service integration guideline and strategies in Ethiopia that can be utilized by service providers or managers and this might be a challenge for the implementation of an integrated family planning and HIV services (MOH Ethiopia 2016). Developing guidelines and strategies related to integration of family planning and HIV services would be useful for the implementation of an integrated family planning and HIV services (Cooper et al., 2015:217).

Table 4.31 List of family planning and HIV service integration strategies (n=91)

List strategies of family planning and HIV integration	Frequency	Percentage
National HIV/AIDS strategy	54	59.3
National PMTCT strategies	19	20.9
FP and HIV integration strategies	10	11
National reproductive health strategies	8	8.8
Total	**91**	**100.0**

Table 4.32 Significance testing of respondents' factors associated with integrated FP and HIV services (N=305)

Covariate	Providing integrated family planning and HIV services			
	Yes	No	Crude Odds Ratio (95%CI)	Adjusted OR (95% CI)
Work experience				
Total years of work experience				
0.1-5	130 (65.3%)	69 (34.7%)	.707 (.182, 2.749)	NA**
5.1-10	60 (72.3%)	23 (27.7%)	.978 (.239, 4.012)	NA**
10.1-15	9 (75.0%)	3 (25.0%)	1.125 (.175, 7.243)	NA**
15.1-35	8 (72.7%)	3 (27.3%)	1	NA**
Family planning experience				
0-2	184 (66.7%)	92 (33.3%)	1.333 (.219, 8.120)	NA**
2.1-4	20 (83.3%)	4 (16.7%)	3.333 (.414, 26.857)	NA**
4.1-6	3 (60%)	2 (40%)	1	
HIV experience				
0-2	156 (65%)	84 (35%)	.714 (.246, 2.072)	.818 (.248, 2.694)
2.1-4	38 (80.9%)	9 (19.15)	1.624 (.460, 5.734)	1.652 (.414, 6.588)
4.1-15	13 (72.2%)	5 (27.8%)	1	1
FP training				
Yes	46 (79.3%)	12 (20.7%)	1.840 (.721, 4.695)	NA**
No	161 (65.2%)	86(34.8%)	1	NA**
HIV training				
Yes	81(63.8%)	46 (36.2%)	.896 (.501, 1.603)	NA**
No	126 (70.8%)	52 (29.2%)	1	NA**
FP and HIV integration training				
Yes	47 (79.7%)	12 (20.3%)	2.105 (1.060, 4.180)*	2.415 (.951, 6.134)
No	160 (65%)	86 (35%)	1	NA**

Covariate	Providing integrated family planning and HIV services			
	Yes	No	Crude Odds Ratio (95%CI)	Adjusted OR (95% CI)
Awareness on FP policies and guidelines				
Yes	46 (82.1%)	10 (17.9%)	2.576 (1.000, 6.637)*	NA**
No	161 (64.7%)	88 (35.3%)	1	
Awareness on HIV policies and guidelines				
Yes	78 (67.2%)	38 (32.8%)	1.274 (.722, 2.250)	NA**
No	129 (68.3%)	60 (31.7%)	1	NA**
Awareness on FP and HIV integration policies and guidelines				
Yes	73 (80.2%)	18 (19.8%)	2.421 (1.348, 4.348)*	**2**.359 (1.096, 5.074)*
No	124 (60.8%)	80 (39.2%)	1	NA**
Availability of policies on integration				
Yes	30 (62.5%)	18 (37.5%)	1.136 (.582, 2.215)	NA**
No	177 (68.9%)	80 (31.1%)	1	NA**
Availability of guidelines on integration				
Yes	22 (75.9%)	7 (24.1%)	.541 (.220, 1.335)	.665 (.232, 1.906)
No	185 (67%)	91 (33%)	1	NA**
Availability of transport				
Yes	28 (80.0%)	7 (20.0%)	**.**403 (.167, .974)*	.485 (.178, 1.322)
No	179 (66.3%)	91 (33.7%)	1	NA**
Availability of FP methods				
Yes	17 (73.9%)	6 (26.1%)	.944 (.323, 2.761)	NA**
No	190 (67.4%)	92 (32.6%)	1	NA**
Availability of HIV commodities				
Yes	34 (65.4%)	18 (34.6%)	1.037 (.537, 2.002)	NA**
No	173 (68.4%)	80 (31.6%)	1	NA**
Availability of trained service providers				
Yes	33 (56.9%)	25 (43.1%)	.628 (.337, 1.169)	1.948 (.969, 3.915)
No	174 (70.4%)	73 (29.6%)	1	NA**
Availability of donor support				
Yes	109 (70.8%)	45 (29.2%)	1.310 (.809, 2.121)	NA**
No	98 (64.9%)	53 (35.1%)	1	NA**
Budget allocation by public health centre				
Yes	46 (68.7%)	21 (31.3%)	1.048 (.585, 1.877)	NA**
No	161 (67.6%)	77 (32.4%)	1	NA**

Covariate	Providing integrated family planning and HIV services			
	Yes	No	Crude Odds Ratio (95%CI)	Adjusted OR (95% CI)
Support from management team				
Yes	46 (76.7%)	14 (23.3%)	1.714 (.892, 3.296)	.783 (.346, 1.773)
No	161 (65.7%)	84 (34.3%)	1	NA**

***p<0.05, NA** not applicable as P>0.02 were not computed in multivariate logistic regression (Teshome & Yalew 2015:10)**

4.6.4 Respondents' opportunities (output)

The opportunities regarding family planning services are discussed below.

4.6.4.1 Opportunities regarding Family Planning services

4.6.4.1.1 Counselling for family planning (n=95)

Table 4.33 indicates that respondents answered more than one question. Of the respondents, 98.9% (n=94) indicated that they always provided adequate information about family planning methods during counselling; 98.9% (n=94) discussed follow-up or return visits; 94.7% (n=90) provided adequate time for counselling; 89.5% (n=85) made an informed choice; 86.3% (n=82) discussed the availability of family planning options; 86.3% (n=82) had good provider-and-client interaction; 78.9% (n=75) used the REDI framework, and 41.1% (n=39) provided pamphlets (see table 4.33). These components of counselling should be provided because adequate information and counselling enhances family planning service (Amhawi et al., 2013:185; Stanback, Steiner, Dorflinger et al., 2015:352-354). Providing comprehensive counselling through the REDI framework is an opportunity to implement the integrated services.

Table 4.33 Counselling in family planning service (n=95)

Counselling of family planning service	Frequency	Percentages	Cumulative frequency	Commutative percentages
Adequate time for counselling				
Always	90	94.7	90	94.7
Sometimes	5	5.3	95	100.0
Never	0	0.0	95	100.0
Use of REDI frame- work				
Always	75	78.9	75	78.9
Sometimes	18	18.9	93	97.8
Never	2	2.0	95	100.0
Provide adequate information				
Always	94	98.9	94	98.9
Sometimes	1	1.1	95	100.0
Never	0	0.0	95	100.0
Provide written BCC materials				
Always	39	41.0	39	41.1
Sometimes	49	51.6	88	92.7
Never	7	7.4	95	100.0
Make an informed choice				
Always	85	89.5	85	89.5
Sometimes	9	9.5	94	99.0
Never	1	1.0	95	100.0
Good provider and client interaction				
Always	82	86.3	82	86.3
Sometimes	13	13.7	95	100.0
Never	0	0.0	95	100.0
Discussed about follow up or return visit				
Always	94	98.9	94	98.9
Sometimes	1	1.1	95	100.0
Never	0	0.0	95	100.0
Availability of all options except permanent contraceptives				
Always	82	86.3	82	86.3
Sometimes	13	13.7	95	100.0
Never	0	0.0	95	100.0

4.6.4.2 Human resource (n=95)

Adequate numbers of service providers with the necessary competency are essential for the implementation of an integrated service (see section 4.6.1.2).

Of the respondents, 61.1% (n=58) indicated that they had attended in-service training in family planning and 38.9% (n=37) had not attended family planning-related training. The respondents who had attended the training indicated the different kinds of training they attended. Of the respondents, 46.6% (n=27) attended comprehensive family planning training; 32.8% (n=19) attended long acting family planning methods, and 20.7% (n=12) attended integrated family planning and HIV training in the past two years (see figure 4.21).

Most of the respondents (60%) had attended some kind of family planning-related training which concurred with Nandita & Yoonjoung's (2014:356-367) finding in Kenya. Providing training for service according to need is essential to ensure providing quality service, including family planning (Samal & Dehury 2015:LE01-LE04) and having trained service providers is an opportunity for the implementation of integrated services (Atuahene, Afari, Adjuik & Obed 2016:5).

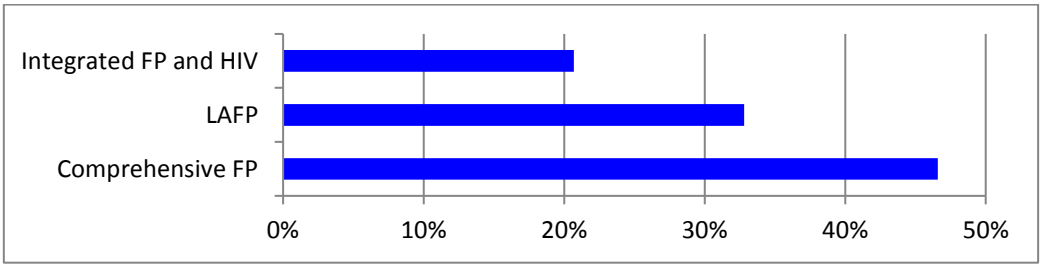

Figure 4.21 Types of training given to service providers in the past 2 years

4.6.4.3 Family planning methods (n=95)

Of the respondents, 75.8% (n=72) indicated that there was no out of stock at the public health centres in the past 6 months which might be an opportunity to implement he integrated services.

Adequate available supplies of family planning commodities have a positive effect on improving the utilization of family planning services (USAID 2012b; UNFPA 2013:1).

4.6.4.4 Fiscal resources (n=95)

Of the respondents, 90.5% (n=86) indicated that there was no shortage of budget or funding for family planning services and 9.5% (n=9) indicated a shortage of budget/funding to provide family planning service.

The main source of funding for family planning is from external donors in Ethiopia (MOH Ethiopia 2014a:14-15) and this might be an opportunity to implement the integrated services.

4.6.4.5 Strategies, polices and guidelines (n=95)

Of the respondents, 60% (n=56) were aware of the availability of family planning-related policies, strategies and guidelines (see section 4.6.1.4).
The respondents who were aware of the family planning-related policies, strategies and guidelines named the different policies, strategies and guidelines. Some respondents named more than one family planning-related policy, strategy and guideline. Of the respondents, 60.7% (n=34) named the family planning counselling flipchart and 51.8% (n=29) named the Ethiopian Health Sector Development Plan (see table 4.34).

The availability of policies, strategies and guidelines is important improve services and reduce maternal deaths (Kana, Doctor, Peleteiro et al., 2015:334). This might be an opportunity to facilitate the integrated services.

Table 4.34 Respondents' awareness of policies, strategies and guidelines on family planning (n=56)

List of policies, strategies and guidelines	Frequency	Percentage
FP counselling flip chart	34	60.7
FP national guideline	5	8.9
Global FP hand book	2	3.6
Health Sector Development Plan (HSDP)	29	51.8
MDGs	13	23.2
Safe motherhood guideline	11	19.6
Training manuals	16	28.6
National Reproductive Health strategy	3	5.4
Abortion guideline	2	3.6

4.6.5 Opportunities regarding HIV services (output)

4.6.5.1 Utilisation of HIV service (n=210)

Of the respondents, 90.5% (n=199) indicated that condom distribution was the main service provided; 87.1% (n=183) indicated HIV counselling; 84.8% (n=178) indicated anti-retroviral therapy (ART); 82.4% (n=173) indicated STI diagnosis and treatment; 81.9% (n=172) stated co-trimoxazole prophylaxis; 80.5% (n=169) stated clinical care for opportunistic infections; 80% (n=168) indicated diagnosis and treatment of tuberculosis (TB); 79.5% (n=167) indicated HIV testing; 67.6% (n=142) indicated behavioural change communication for the use of HIV service; 61.4% (n=129) indicated referral services; 49% (n=103) indicated nutrition care and support, and 34.3% (n=72) indicated palliative care (see table 4.35). This concurred with Banda, Benson, Lawrence et al. (2014:20) finding that the majority of service providers offered HIV counselling and testing, condom distribution, PMTCT care and support, and ART services. According to the WHO (2014c:25-78) HIV prevention, diagnosis and treatment guide the basic components of HIV services that are available and offered by service providers at the public health centre level.

Of the respondents, 91.4% (n=192) indicated that all the above HIV services were always available at the time of data collection. The basic components of HIV services were thus widely available at the public health centre level and this is an opportunity to implement the integrated services.

Table 4.35 HIV services availability at public health centres (n=210)

Type of service	Frequency	Percentages	Cumulative frequency	Cumulative percentages
Behavioural change communication for the use of HIV services				
Yes	142	67.6	142	67.6
No	68	32.4	210	100.0
Condom distribution				
Yes	190	90.5	190	90.5
No	20	9.5	210	100.0
STI diagnosis and treatment				
Yes	173	82.4	173	82.4
No	37	17.6	210	100.0
HIV counselling				
Yes	183	87.1	183	87.1
No	27	12.9	210	100.0
HIV testing				
Yes	167	79.5	167	79.5
No	43	20.5	210	100.0
Referral services				
Yes	129	61.4	129	61.4
No	81	38.6	210	100.0
Co-trimoxazole prophylaxis				
Yes	172	81.9	172	81.9
No	38	18.1	210	100.0
Providing anti-retroviral therapy				
Yes	178	84.8	178	84.8
No	32	15.2	210	100.0
Nutrition care and support				
Yes	103	49.0	103	49
No	107	51.0	210	100.0
Clinical care for opportunistic infections				
Yes	169	80.5	169	80.5
No	41	19.5	210	100.0
Palliative care				
Yes	72	34.3	72	34.3
No	138	65.7	210	100.0
Diagnosis and treatment of tuberculosis				
Yes	168	80.0	168	80
No	42	20.0	210	100.0

Figure 4.22 indicates that the respondents identified the most high-risk groups (MARPS) who came for HIV services at the public health centres as follows: mobile workers (70.5%; n=148); female sex workers (67.1%; n=141); persons in uniform (51.9%; n=109); school youth (28.1%; n=59); men who have sex with men (MSM) (11.4%; n=24); housemaids (10%; n=21); prison inmates (5.7%; n=12) and waiters (2.9%; n=6). Although the category of MARPS groups who visit the health facilities differs from country to country (HAPCO 2012:23), it is very important to provide services for MARPS groups (Ajibade 2016). The availability of services for such groups can be an opportunity to offer the integrated services, such as family planning and HIV services (Vun, Fujita, Rathavy et al., 2014:18905).

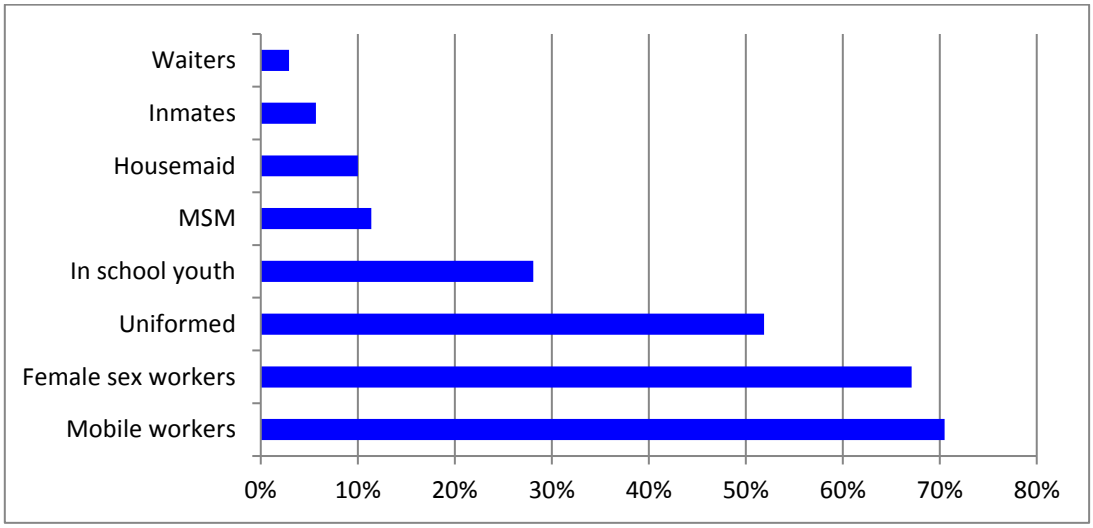

Figure 4.22 Most at-risk groups of population frequently treated at public health centres

Another opportunity was counselling service provided before HIV testing. Table 4.36 presents the respondents' key components of counselling (some answered more than one component). Of the respondents, 98.1% (n=206) indicated that they always kept information about clients' confidentiality of HIV status; 96.7% (n=203) gave the HIV test result on the same day as the HIV counselling; 53.8% (n= 113;) gave referral service for all HIV-positive clients for additional service, and 50.5% (n=106) discussed partner referral for all HIV counselling and testing (see table 4.36). These key components of counselling are also provided in other South Africa (Mwisongo, Mehlomakhulu, Mohlabane et al., 2015:278) and Uganda and other African countries (Wanyenze, Kyaddondo, Kinsman et al., 2013:423). The respondent service providers addressed

the essential components of counselling and this could be an opportunity to improve the utilization of HIV counselling and testing for clients as well as partners.

Table 4.36 HIV counselling services (n=210)

Counselling of HIV services	Frequency	Percentages	Cumulative frequency	Cumulative percentages
Keep information about your client's confidentiality				
Always	206	98.1	206	98.1
Sometimes	4	1.9	210	100.0
Never	0	0.0	210	100.0
Provide the HIV test result on the same day as the HIV counselling				
Always	203	96.7	203	96.7
Sometimes	5	2.3	208	99.1
Never	2	1.0	210	100.0
Provide partner notification card for all HIV counselling and testing clients				
Always	106	50.5	106	50.5
Sometimes	57	27.1	163	77.6
Never	47	22.4	210	100.0
Provide referral service for all HIV-positive clients for additional service				
Always	113	53.8	113	53.8
Sometimes	86	41.0	199	94.8
Never	11	5.2	210	100.0

4.6.5.2 Human resources (n=210)

Of the respondents, 72.4% (n=152;) indicated that there were optimum numbers of staff to offer HIV service at the public health centre level. Mwambetania et al. (2014:11) found that service providers indicated that they had enough staff to offer HIV services at their health facilities. This might be due to governmental commitment and the available donations (AVERTing HIV and AIDS 2015) and could therefore be an opportunity to facilitate integrated services.

Competency of service providers is required to offer HIV services. Of the respondents, 60.5% (n=127) had undergone training related to HIV in the past two years. Of the respondents, 44.9% (n=57) had attended prevention of mother-to-child transmission (PMTCT) training; 8.9% (n=24) had attended provider initiated HIV testing and counselling (PITC) training; 12.6% (n=16) had attended Anti-retroviral therapy (ART) training; 12.6% (n=16) had attended voluntary HIV counselling and testing (VCT) training; 4.7% (n=6) had attended clinical mentoring training; 2.4% (n=3) had attended adherence counselling training; 2.4% (n=3) had attended nutrition for HIV patients training; 0.8% (n=1) had attended palliative care training, and 0.8% (n=1) had attended integrated family planning and HIV training in the past two years (see table 4.37).

In their study in Kenya, Smith et al. (2016:324) found that the participants had attended the training related to HIV.

Table 4.37 Respondents' type of HIV training in the past 2 years (n=127)

Type of training	Frequency	Percentage	Cumulative frequency	Cumulative percentage
Adherence and counselling	3	2.4	3	2.4
ART	16	12.6	19	15.0
Clinical mentoring	6	4.7	25	19.7
Integrated FP and HIV	1	0.8	26	20.7
Nutrition	3	2.4	29	23.1
Palliative care	1	0.8	30	24.1
PITC	24	18.9	54	43.0
PMTCT	57	44.9	111	87.9
VCT	16	12.5	127	100.0

4.6.5.3 Strategies, polices and guidelines for HIV/AIDS service provision (n=210)

Of the respondents, 55.5% (n=116) were aware of the availability of HIV-related policies, strategies and guidelines (see section 4.6.2.5). It is essential for service providers to be aware of HIV-related policies, strategies and guidelines for offering services (Adamchak et al., 2011:41). However, it is not sufficient for service providers to only know the availability of policies, strategies and guidelines; it is also essential to ensure that policies, strategies and guidelines are always available at the health facility

level for use as a reference for service providers (O'Malley, Asrat, Sharma et al., 2014:e9). Figure 4.23 shows that 74.1% (n=86) of the respondents indicated that all the policies, strategies and guidelines were available at the public health centre level.

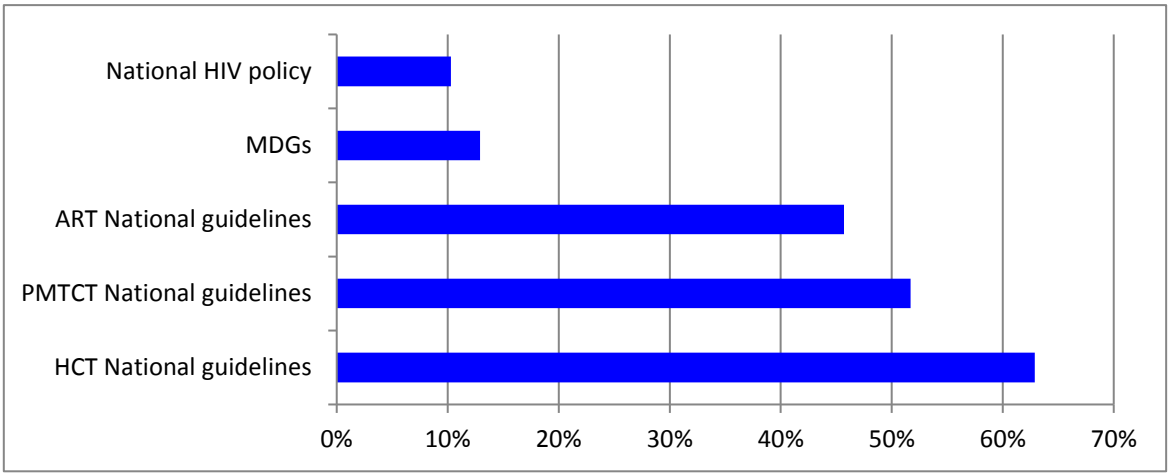

Figure 4.23 Respondents' awareness of titles of policies, strategies and guidelines (n=86)

4.6.5.4 Behavioural change communication for the use of HIV service(n=210)

Of the respondents, 97.1% (n=204) indicated that mass media improved the community's knowledge of HIV while 2.9% (n=6) indicated that the mass media did not contribute to improved the knowledge of HIV because the mass media was not accessible to the rural community. The use of mass media had a positive effect on improving clients' knowledge of HIV prevention (LaCroix, Snyder, Huedo-Medina & Johnson 2013:329-340; Jung, Arya & Viswanath 2013:e68359).

The respondents who indicated mass media improved the community's knowledge of HIV were asked to explain how the mass media improves the knowledge on HIV (see table 4.38). Three themes emerged from their answers, namely accessibility of mass media, trustworthiness of mass media, and testimonies. The categories of the accessibility of mass media were target audiences, information to a large population and language.

Table 4.38 Mass media improves clients' knowledge

Theme	Categories	Direct statements
Accessibility of mass media	Target audiences	• Mass media is useful to address illiterate people as a specific target audience • Address the issues of stigma and discrimination for persons living with HIV, using specific channels of communication
	Information to large population	• Mass media can address many people to create awareness of clients • The media can create awareness for a large number of the population with in short period of time • Most people watch mass media every day • Good knowledge can be gained from mass media • Mass media can give new information
	Language	• Mass media is a good way to transmit information in different languages • Transmission of messages is possible in different local languages
Trust	Reliance on mass media	• I believe most people trust the mass media • The community rely on mass media • People believe the messages from mass media
Testimonies	Sharing of life experiences	• I suggest organizing sharing life experiences of persons living with HIV for the community • Organize live speeches that can be transmitted by persons living with HIV to educate other people • I suggest it would be good if family planning clients provide their experiences in mass media

4.6.6 Opportunities of an integrated family planning and HIV services (output)

4.6.6.1 Utilisation of an integrated family planning and HIV services (N=305)

Of the respondents, 67.9% (n=207) had experience to provide integrated family planning and HIV services, while 32.1% (n=98) did not have experience in providing integrated family planning and HIV services.

The respondents who had experience of integrated family planning and HIV service indicated different ways of offering integrated services (see figure 4.24). Of the respondents, 60.4% (n=125) offered integrated family planning and PITC services; 44.9% (n=93) offered family planning and voluntary HIV counselling and testing (VCT) services; 44.4% (n=92) offered family planning and anti-retroviral therapy (ART); 42.5% (n=88) offered family planning and prevention of mother-to-child transmission (PMTCT) services, and 0.5% (n=1) offered family planning and home-based care services. The availability of different ways of integrating service is an opportunity to implement the integration of family planning and HIV services at the public health centre level (Knowledge for Health Project 2016b).

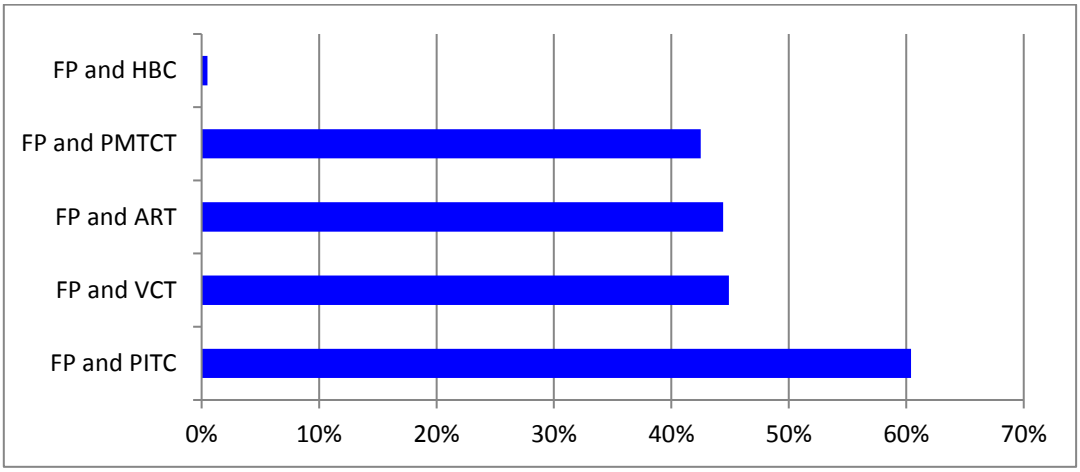

Figure 4.24 Respondents' ways of integrating family planning and HIV services (n=207)

The respondents who had experience with integrated family planning and HIV service (n=207) indicated the different kinds of approaches of integrated services (see figure 4.25). Of the respondents, 47.8% (n=100) indicated that they provided integrated family planning service with the existing HIV service and integrated HIV service with the existing family planning service. Of the respondents, 46.9% (n=98) integrated family planning service into existing HIV service; 30.6% (n=64) integrated HIV service into existing family planning service, and 2.9% (n=6) indicated that they did not know the type of approach utilized for the integrated service. Two ways of service integration approaches are popular in most developing countries, including Ethiopia, namely family planning integration into existing HIV services and HIV integration into the existing family planning service (Knowledge for Health Project 2016b). These might be an opportunity to implement the integration of family planning and HIV services.

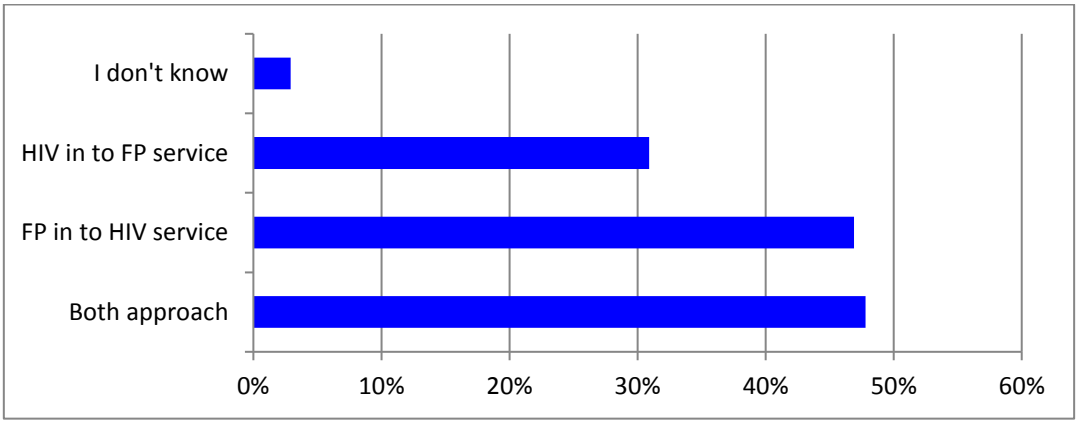

Figure 4.25 Approaches to family planning and HIV integration

The respondents who had experience with integrated family planning and HIV service also indicated the services set up. Of the respondents, 48.8% (n=101) offered integrated family planning and HIV services in a single room; 28% (n=58) offered the services in different rooms and with different providers; 21.3% (n=44) offered the services in a single room but by different provider, and 1.9% (n=4) offered the service with different providers in a different facility (see table 4.39). When service providers offer the integrated service in a single room with the same provider, it is likely to increase the utilization of the integrated family planning and HIV services than different rooms in the same compound or in different facilities because it is more convenient for clients (Bradley et al., 2010:1295). The availability of different set-ups in the public health centre might be an opportunity to implement the integrated family planning and HIV services as well as increase client and service provider convenience and satisfaction.

Table 4.39 Set-up of the integrated FP and HIV services at the public health centre (n=207)

Facility set-up	Frequency	Percentage	Cumulative frequency	Cumulative percentage
Single room, same service provider	101	48.8	101	48.8
Single room, different service provider	44	21.3	145	70.1
Different room, different service provider	58	28	203	98.1
Different facility, different service provider	4	1.9	207	100.0

4.6.6.2 Human resources (N=305)

Of the respondents, 42% (n=189) indicated that there was an adequate number of staff to offer the integrated family planning and HIV service at the public health facility (see section 4.6.3.2.1).

Of the respondents, 19.3% (n=59) attended training related to family planning and HIV service integration in the past 2 years (see section 4.6.3.2.2). The respondents who attended the integrated family planning and HIV-related training indicated the different types of training they attended. Of the respondents, 40.7% (n=24) attended the family planning and provider initiated HIV testing and counselling (PITC) training; 30.5% (n=18) attended prevention of mother-to-child transmission and family planning; 25.4% (n=15) attended integrated family planning and HIV training, and 3.4% (n=2) attended family planning and ART training (see figure 4.16). Although only 19.3% of the respondents were trained, it might be an opportunity for implementing the integrated services.

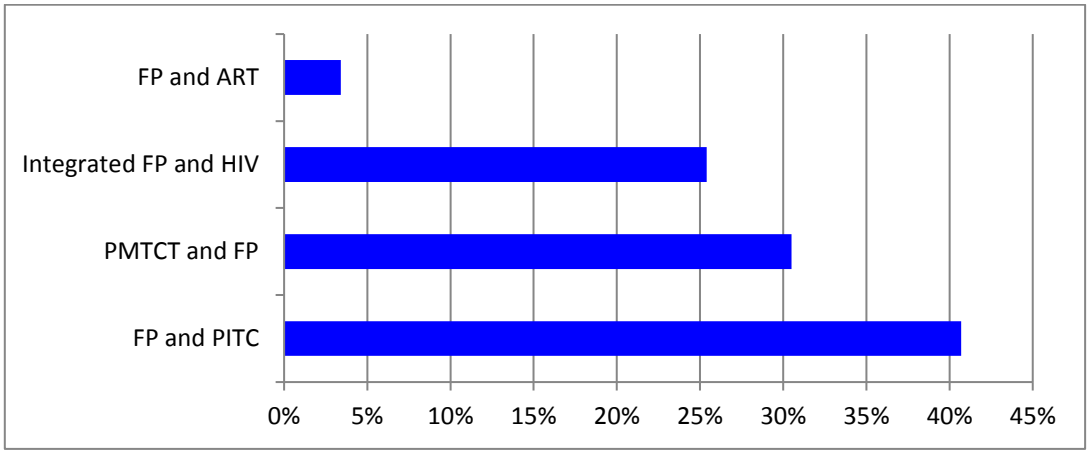

Figure 4.26 Respondents' training received in the past 2 years (n=59)

4.6.6.3 Fiscal resources (N=305)

Of the respondents, 78% (f=268) indicated that adequate fiscal resources were available and thus an opportunity for the implementation of the integrated family planning and HIV services. This finding concurred with MOH Ethiopia's (2014a:13) budget analysis that indicated that most of the funds (83%) for HIV integrated services are donated from donors. This might be an opportunity to facilitate the integrated family planning and HIV services.

4.6.6.4 Infrastructure (N=305)

Of the respondents, 69.8% (n=213) indicated that their health facilities have good infrastructure. In Tanzania, An, George, LeFevre et al. (2015:451) found that health centres had good infrastructure. Good infrastructure is a necessity when the integrated family planning and HIV services at the public health centre level are implemented.

4.6.6.5 Strategies, polices and guidelines for the integrated family planning and HIV/AIDS service provision (N=305)

Of the respondents, 29.8% (n=91) were aware of the availability of family planning and HIV service integration guidelines (see section 4.6.3.6). This finding is lower than that of Adamchak et al. (2011:41) and must be addressed to implement the integrated family planning and HIV services.

4.6.6.6 Behavioural change communication for use of an integrated family planning and HIV services (N=305)

Of the respondents, 78.8% (n=240) indicated that behavioural change communication (BCC) materials were available at the public health centres while 21.3% (n=65) indicated that BCC materials were not available at the public health centres.

The respondents who indicated that the behavioural change communication (BCC) materials were available described the different types available. Of the respondents, 76.3 (n=183) indicated that posters were available; 75.8% (n=182) indicated leaflets; 55% (n=132) indicated brochures, and 5.8% (n=14) indicated that health education scripts/models were available. The provision of BCC materials is good way to improve clients' awareness (UNICEF 2016) and could be an opportunity to implement the integrated family planning and HIV services.

4.7 ADVANTAGES AND DISADVANTAGES OF FAMILY PLANNING AND HIV SERVICE INTEGRATION (N=305)

Of the respondents, 92.8% (n=283) indicated that family planning and HIV services must be integrated at public health centre level, and 7.2% (n=22) indicated there was no need to integrate services at the public health centre level.

The respondents were asked for their views on the advantages and disadvantages of an integrated family planning and HIV services. Of the respondents, 85.5% (n=242) indicated that the integrated family planning and HIV services had advantaged and 20.7% (n=63) indicated that the integrated family planning and HIV services had disadvantages.

The respondents who indicated that the integrated family planning and HIV services had advantages listed the advantages. Of the respondents, 85.5% (n=242) indicated that increased access for family planning and HIV service was the main advantage of integrating family planning and HIV services; 74.8% (n=181) indicated that it promoted dual protection; 57.4% (n=139) indicated more efficient use of staff time; 56.2% (n=136) indicated that it improved teamwork; 51.2% (n=124) stated that integration reduced stigma and discrimination; 52% (n=126) indicated it avoided missed opportunities, and 22.7% (n=55) stated it reduced cost. These advantages are essential to achieving universal health coverage and can improve the health status of the people in a cost-effective manner (WHO 2015g; WHO 2016h).

The respondents who indicated that the integrated family planning and HIV services had disadvantages listed them. The respondents listed more than one disadvantage. Of the respondents, 71.4% (n=45) indicated it increased clients' waiting time; 44.4% (n=28) stated it reduced the quality of care; 15.9% (n=10) indicated it affected other activities of the health centre, and 9.5% (n=6) stated it increased work overload. All the disadvantages must be addressed for effective implementation of an integrated family planning and HIV service (Nwokedi 2012:12).

Table 4.40 lists the seven themes that emerged from implementing the integration of family planning and HIV service at the public health centre level. The themes were resources; capacity building; knowledge; management; monitoring and supervision;

policies, strategies and guidelines, and coordination and referral system. The categories of resources were infrastructure, fiscal, medical and human resources. The categories of monitoring and supervision were improving monitoring and supervision and the need for training on monitoring and supervision skills. The categories of coordination and referral system were improving coordination and partnership and improving the referral system.

Table 4.40 Respondents' suggestions to facilitate integrated family planning and HIV service at the public health centre level

Theme	Categories	Direct statements
Resources	Infrastructure	• Making enough rooms available can improve an integrated family planning and HIV service • Wide and private rooms might help to improve an integrated family planning and HIV service • I propose making comfortable rooms for service provision
	Fiscal resource	• I suggest allocating enough budget • Providing sufficient financial support is essential for the implementation of an integrated family planning and HIV service
	Medical resources	• Enough supply of HIV testing kits and contraceptives can facilitate the implementation of an integrated family planning and HIV services • Make medical equipment available for IUD/implant insertion/removal services
	Human resources	• Trained service providers are needed to provide an integrated family planning and HIV service • I suggest sufficient numbers of service providers are a requirement
Capacity building	The need for training	• Provide refresher training for service providers • I suggest providing training in long-acting family planning methods as it requires clinical skill training
Knowledge	Improving knowledge	• I would like to suggest working on awareness creation activities at the community level • Enhance the media coverage • Teach the community

Theme	Categories	Direct statements
		• Educate HIV-positive people • I suggest educating clients by organizing the coffee ceremony in the village
Management	Strengthening leadership	• Motivate the service providers • Solving some management problems can help to improve an integrated family planning and HIV services
Monitoring and supervision	Improving monitoring and supervision	• I propose conducting regular monitoring and supervision activities • Establishing a feedback mechanism might help to improve an integrated family planning and HIV services
	The need for training on monitoring and supervision skills	• Provide training in monitoring and supervisory skills for health managers is essential to improve an integrated family planning and HIV services
Policies, strategies and guidelines	Availability of policies, strategies and guidelines	• I strongly recommend providing an integrated family planning and HIV services in a single room • I would suggest revising the health policy • Develop new guiding policies/strategies to avoid service interruption and implement the existing ones
Coordination and referral system	Improving coordination and partnership	• NGOs and government should work together
	Strengthening the referral system	• I suggest improving the referral system between the health facilities

4.8 SUMMARY

The quantitative as well as the qualitative data analyzed in phase 1 summarized the challenges and opportunities that can affect the integration of family planning and HIV services. The challenges and opportunities are summarised below.

4.8.1 Challenges

The clients: Lack of awareness of family planning methods, male involvement and marital status were the challenges statistically significantly associated with the use of family planning services. Client satisfaction was the only challenge statistically associated with HIV testing. The family monthly income level, awareness of family

planning methods and long waiting time were the challenges statistically significantly associated with the use of integrated family planning and HIV services (see sections 4.3.1-4.3.3).

The service providers: Although a lack of training in family planning and HIV integration, low awareness of family planning policies/guidelines, and family planning and HIV integration policies/guidelines and the availability of transportation were statistically significant challenges, the qualitative data revealed that infrastructure, the unavailability or shortage of medical resources and human resources were also challenges identified by respondents that might impact on the family planning, HIV and the integrated family planning and HIV services (see sections 4.6.1-4.6.3).

4.8.2 Opportunities

The clients: Previous experience of receiving services is an opportunity that could influence the family planning, HIV and integrated family planning and HIV services. Good counselling is an opportunity that might have an impact on family planning and HIV services. Men's involvement was identified as an opportunity that might influence HIV and integrated family planning and HIV services. Good client satisfaction was identified as an opportunity that might impact on the integrated family planning and HIV services (see sections 4.4.1-4.4.3).

The service providers: The existence of adequate human resources, availability of BCC materials and good accessibility of services, adequate budget, good counselling and medical resources availability were identified as opportunities that could affect the family planning, HIV and the integrated family planning and HIV services (see sections 4.7.1-4.7.3).

The challenges and opportunities were shared with the nominal groups (see section 5.4) to inform the participants of the nominal group about the challenges and opportunities experienced by the clients and service providers. The nominal groups were therefore able to identify strategies that informed the strategic plan and were involved in the development of the strategic plan as well as the validation process (see chapter 7).

CHAPTER FIVE

PHASE 2 RESEARCH DESIGN AND METHODOLOGY

5.1 INTRODUCTION

This chapter describes the research design and methodology used in phase 2 of the study. The data obtained in phase 1, combined with the literature review, informed phase 2 of the study. This chapter describes the research methodology of phase 2. The researcher utilized the nominal group technique (NGT) as a data-collection instrument to identify strategies used to develop a strategic plan to facilitate the implementation of an integrated family planning and HIV service. Chapter 6 discusses the nominal group data-collection process as part of the interpretation of the findings.

5.2 UNIT OF ANALYSIS

The unit of analysis was the ten (10) family planning and ten (10) HIV programme officers invited from the sub cities (10 sub-cities) of Addis Ababa. In addition, the family planning and HIV programme coordinators from Addis Ababa City Administration Health Bureau as well as the National Family Planning and the HIV National Coordinator from the Ministry of Health were invited to participate. There is one coordinator for each service. A total of 24 programme officers served as the unit of analysis in this study. To ensure congruency, they are called programme officers.

All-inclusive sampling was done in this phase as all programme officers responsible for family planning and HIV programmes at sub-city, city administration and national level were recruited to volunteer to participate. They participated in two separate nominal groups, each group consisting of 12 participants − six family planning programme officers and six HIV programme officers in each group.

The researcher provided an information sheet and consent form (see Annexure 5) to inform the participants of the purpose of the nominal group. The participants were asked to indicate their willingness to participate. If they agreed to participate, the time and

venue for the nominal groups were arranged. The family health sub-process owner at the Addis Ababa City Administration Health Bureau was the gatekeeper who was responsible for recruiting all the nominal group participants and arranged the dates and venues suitable to all participants to attend the nominal group discussions. The nominal groups were conducted on 26 and 28 October 2016 in a small conference room in two hotels in Addis Ababa.

5.3 EXPLORATORY INTERVIEW

An exploratory interview was conducted with family planning and HIV programme officers, from non-governmental organizations, who were not part of the study. The purpose of the interview was to test the instruction (question) as well as the facilitator's competency. Four (4) programme officers, namely 2 from family planning and 2 from HIV were purposefully selected to participate in the interview. The instruction tested was:

> *Please write down the strategies that can be implemented to facilitate the integration of family planning and HIV services at the public health centre level*.

The facilitator explained the purpose of the study and the exploratory interview and the process that would be followed in order to ensure that the instruction (question) was appropriate for the identification of the strategies. Section 5.4.3 describes the steps. The process was stopped before the analysis and voting phase, because the purpose was only to assess whether the instruction was correct. The facilitator thanked the participants for their participation.

No changes were made to the instruction as the participants had no difficulties and the information required was obtained.

5.4 NOMINAL GROUP TECHNIQUE (NGT)

The nominal group technique (NGT) is a process of identifying and prioritizing problems or challenges and the development of joint solutions by a small group of people (McMillan, King & Tully 2016:655). The nominal group technique (NGT) is also referred

to as a problem exploration and consensus seeking method that allows participants to generate and present a number of ideas without any limitations (Abdullah & Islam 2011:82).

The ideal size of a nominal group is 3-12 people (De Vos et al., 2011:503) and it normally lasts for between 2 hours and 2 and a half hours (Varga Atkins, Bunyan, McIsaac & Fewtrell 2011:6).

The nominal group technique was selected as the data-collection method because it is suitable to gather qualitative information from different target groups (Abdullah & Islam 2011:82-87). In this study, the programme officers were involved to identify strategies and develop a strategic plan to facilitate the integration of family planning and HIV services. The nominal group technique was adopted to ensure that the strategies identified by the nominal group members were shaped by evidence from the results in phase 1 (see chapter 6, section 6.3 and chapter 7, table 7.1).

The nominal group has the following advantages that made it suitable for the data collection in this study. The technique helps to balance the influence of individuals including the researcher (Van de Ven & Delbecq 1972:337-340). In this study, the facilitator facilitated the nominal group technique (see section 5.4.3. for the complete process). Moreover, it ensured that the process was correctly followed so that each participant had an equal opportunity to generate and suggest their own individual inputs.

The nominal group is also useful to generate a large number of ideas through the silent generation of ideas (see section 5.4.3.2, step 2) in a relatively short time (Abdullah & Islam 2011:87). In this study, the overall nominal group took 90 minutes and the programme officers generated 60 ideas within the 10 minutes of silent generation of ideas in both nominal groups to identify the strategies that were used to develop a strategic plan to facilitate the implementation of an integrated family planning and HIV service.

The nominal group technique (NGT) contributes to immediate problem-solving, idea-generation, or determining priorities through a consensus method for health care services (McMillan et al., 2016:655-662).

The use of two nominal groups allowed the researcher to collect statements from programme officers which had an equal value in the consensus seeking process (Roets & Lubbe 2015:152-153). In this study, every input from each participant had equal value and was treated equally without any bias.

The nominal group technique also has limitations. For example, it requires an experienced facilitator to organize the nominal group and one that adheres to all the rules and steps of nominal techniques (Abdullah & Islam 2011:87-88). The facilitator was experienced and qualified to conduct nominal groups (see section 5.4.2). The technique does not allow dealing with more than one issue and/or a detailed discussion at any given time. Only one instruction was required for the purpose of the nominal groups in this study. The technique also requires time to reach consensus, but the voting process allowed for an easy consensus seeking process (Abdullah & Islam 2011:88). The nominal group requires intensive preparation to organize the session (Van de Ven & Delbecq 1972:337-340). The researcher organized the two nominal groups in the same manner.

5.4.1 Venue

A conference room that could accommodate fifteen people was prepared for each session in the two hotels in Addis Ababa. One venue was arranged for 26 October and the other for 28 October 2016. The conference room was booked one month before the date of the nominal group session. The room had adequate lighting, ventilation and optimum temperature and was comfortable for the participants. The seating arrangement in the room was prepared as “U” shaped to ensure that each participant could see directly to the flip chart as well as the screen where the overhead projector was displayed (see figure 5.1). A laptop and screen were prepared and placed in front of the U-shaped seating place in the room (see figure 5.1).

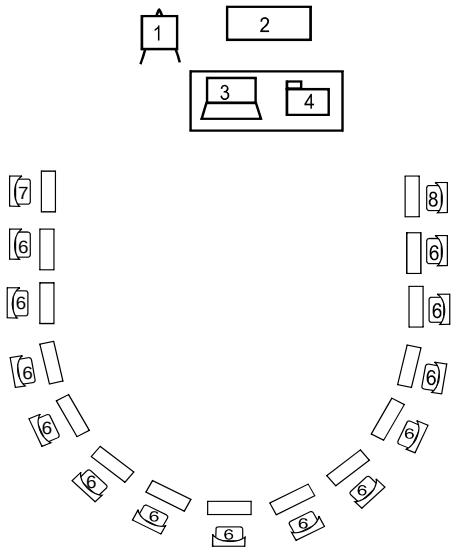

Figure 5.1 Seating and materials arrangements for the nominal group technique (NGT)

KEY: (1) Flip chart (2) Display screen (3) Laptop (4) LCD (5) Table placed in the centre of the open space (6) Participant (7) Researcher (8) Facilitator

On the table in front of each participant, a pencil, notepad and 3" x 5" five index cards were placed (Centers for Disease Control and Prevention 2015). Flip chart, artline markers and masking tape were prepared to capture the participants' ideas of participants during Round-Robin listing of ideas in session II (see section 5.4.3.2, step 3). Two nominal groups were conducted, 12 participants per nominal group.

5.4.2 Facilitator

An experienced nominal group facilitator was invited to facilitate the nominal group. The facilitator, an Assistant Professor at Addis Ababa University, has a PhD and extensive experience and competencies pertaining to the facilitation of nominal groups (NGT) at national and international level. The researcher contacted the facilitator who agreed to act as facilitator. The researcher and facilitator agreed on the remuneration and transport expenses. After agreement of the conditions, the venue and dates for conducting the groups were arranged.

The instruction (question) and the facilitation process were tested during the exploratory interview (see section 5.3) and the transcript was shared with the supervisor to agree on the competency of the facilitation process.

The facilitator followed all the steps of a nominal group (see section 5.4.3.2) (Van de Ven & Delbecq 1972:339-340; Roets & Lubbe 2015:154). The facilitator carried out all the rules and steps of the nominal group during facilitation. The researcher thanked the facilitator for conducting the nominal groups.

5.4.3 Process

The two nominal groups were conducted in the same manner. The researcher welcomed the participants and introduced the facilitator and the scribe. Following this, each participant introduced him- or herself.

The facilitator described the overall process and ensured that the participants understood why the nominal group technique was chosen as data-collection instrument. The purpose, ground rules and steps in the process were clarified. The facilitator explained that the nominal group discussion would entail two sessions.

5.4.3.1 Session I: Presentation of data collected in Phase 1 (30 minutes)

The researcher did a power point presentation that included a summary of the results obtained in phase 1 for about 30 minutes including the time allowed for questions. The purpose was to inform to the participants what the clients and the service providers on ground level identified as challenges and opportunities (Phase 1) (see chapter 4, sections 4.3.1-4.3.3, 4.4.1-4.4.3, 4.6.1-4.6.3 and 4.7.1-4.7.3). The results included the challenges and opportunities of family planning and HIV service integration at the public health centre level as indicated by the clients and service providers.

5.4.3.2 Session II: The nominal group technique (90 minutes)

Step (1) Instruction: Participants were asked to read the consent form and sign and return it to the facilitator (see Annexure 5). They were also informed that participation was voluntary and they were allowed to withdraw their participation at any stage,

without any penalty if they wished to discontinue. All participants agreed and signed the consent form and returned to the facilitator.

Each participant received the instruction in writing (see Annexure 9). The facilitator read the instruction and gave further explanation to clarify participants' questions and issues. The instruction (question) was:

> Please write down the strategies that can be implemented to facilitate the integration of family planning and HIV services at the public health centre level.

After that the steps were followed to identify the strategies (Van de Ven & Delbecq 1972:339-340; Roets & Lubbe 2015:154).

Step (2) Silent generation of ideas in writing: The participants were asked to consider the quantitative results from phase 1 and write down all the possible strategies that could facilitate the integration of family planning and HIV services at the public health centre level in Addis Ababa. The participants were given 10 minutes to complete this exercise. The facilitator followed the process and the participants were asked to stop when the time was exhausted. All the participants completed this step within 10 minutes.

Step (3) Round Robin listing of ideas: (a) The facilitator asked one volunteer to present his/her first idea from the list. (b) The scribe wrote the volunteer's idea on the flip chart. (c) The next participant (clockwise) sitting next to the first read out his/her first strategy on the list. (d) The scribe wrote the idea on the flip chart. Only one idea was allowed to be mentioned in a single round. The rounds were repeated until all ideas had been exhausted. If a participant did not have any new strategies to add he/she could say `pass` and the next person could continue on their list. The facilitator ensured that each participant talked only at the time of his/her turn and all the ideas were correctly listed on the flip chart. The round robin was completed and no new ideas were generated.

Step (4) Serial discussion of ideas: This step gave the participants an opportunity to discuss or elaborate on their ideas. The participants were allowed to participate in the

analysis process to sort similar strategies into one category from the list of strategies (see chapter 6, section 6.3).

Step (5) Voting to select five most important strategies: This step allowed the participants to vote for the five strategies that they felt were the most important. Five voting cards were given to each participant to vote for the themes (strategies). The participants were asked to choose and write the five most important themes (strategies) on the voting cards provided (see figure 5.2). The participants were then asked to give 5 points in the right hand corner of the card with the name of the themes that they recognised were the most important. Then in the right hand corner of the card with the theme they felt was the least important of the 5 was given 1 point. In the same way 2, 3 and 4 points were allocated. The facilitator asked them to write the number of the selected strategy and name of the specific strategy in the middle of the voting card as listed on the flip chart (see figure 5.2).

Figure 5.2 Sample of card used for voting on strategies

Then an additional step of the original NGT was followed to check the completeness and correctness of the voting cards as well as the capturing and ranking of strategies (Roets & Lubbe 2015:155). After each participant completed the voting cards, the facilitator checked each card.

To keep the participants actively involved, the facilitator asked five volunteers to collect the cards by ranking. One volunteer collected all the cards participants had ranked as the first priority. A second volunteer collected the second priority, and this continued until the fifth priority. The volunteer who collected the cards was also asked to read the most important one indicated 5 in the middle of the card followed by the name of the strategy and the second volunteer sitting next to the reader checked the correctness of the written priority strategy. Then the facilitator captured the scores next to each strategy on the flip chart. The process continued until all the votes were recorded. The participants were responsible for confirming the correctness of the scores given to each

voted strategy. The facilitator listed all the selected strategies and the scores indicated on each specific voting card. The scores were counted and the strategies were listed in order from the highest to the lowest ranking (see chapter 6, section 6.4.5 for ranking).The results would be shared after the multiple group analysis during the development of the strategic plan (see chapter 7, section 7.3.3). The facilitator followed the same procedure for both nominal group techniques to collect the data.

5.5 MULTIPLE GROUP DATA ANALYSIS

The data obtained from the two nominal groups was analyzed by multiple group analysis process. The researcher applied the step-by-step procedures of multiple group analysis (Roets & Lubbe 2015:156-164), using electronic formats to simplify the steps be followed with multiple group analysis. The participants were involved in the analysis of the data in their own group, and the multiple group analysis was done by the researcher and co-coder. The following key steps of multiple group analysis were applied in this study.

5.5.1 Create an initial spread sheet on a MS word document

A table was created in an MS word document with eight columns to record the individual statements, categories and themes (see table 5.1). The researcher and nominal groups started to record and analyse with the first nominal group called G1 and the same procedure followed with the second group, G2.

Table 5.1 Recording the individual statements, categories and themes

A: Name of the group	B: number of selected theme	C:Theme	D: Categories	E: Individual statements	F: Scores (for the themes)	G: Average scores (E/number of participants)	H: Top 5
G1	1						
G1	1						
G1	1						

5.5.2 Identify the top 5 strategies from each group

In order to identify five top strategies the researcher and the participants used an electronic word document and selected all the columns and rows except the rows with headings, and sorted in ascending order in column A using the “sort” function to ensure that both groups were not mixed in the data table. The top five strategies were marked “X’’ in column H (see chapter 6**,** section 6.4.2 for discussion).

5.5.3 Content analysis of the data

In this step, the researcher and participants again checked the correctness of categorizing the individual statements with the agreed upon categories/themes and ensured that no statements were missed.

5.5.4 Calculating combined ranking for consolidated and prioritized list

The researcher and participants selected all the columns and rows and sorted column B (selected themes) in ascending order and Column G (top 5) in descending order to identify themes marked “X”. All themes marked “X” were listed at the top in the data sheet (see chapter 6, section 6.4.4).

5.5.5 Finalise ranking process

The researcher and the participants created a new data sheet and all themes marked “X” were copied and pasted into the new data sheet. Step-by-step ranking was done (see chapter 6, section 6.4.5).

5.6 TRUSTWORTHINESS

Trustworthiness is “the degree of confidence that qualitative researchers have in their data, using the strategies of credibility, dependability, confirmability, and transferability” (Polit & Beck 2014:598). To ensure the trustworthiness of the study, the researcher used credibility, dependability, confirmability, and transferability.

Credibility refers to confidence in the truth of the data and interpretation of data (Polit & Beck 2014:599). Qualitative research must strive to establish confidence in the truth of the findings for the particular participants and contexts in the research. Credibility involves two aspects: first, carrying out the study in a way that enhances the believability of the findings, and second, taking steps to demonstrate credibility in research reports (Polit & Beck 2014:599). In this study, the researcher ensured that the participants knew the topic and were involved in the nominal group technique (NGT). All the participants were involved in coordinating and managing the family planning and HIV programme public health centre and sub city administration level. The nature of a nominal group allowed for credibility as equal opportunity was given to each participant to generate ideas in a Round Robin manner and the participants were actively involved from idea generation to analysis, voting and ranking.

Dependability refers to the stability and reliability of data over time and conditions (Polit & Beck 2014:599). This means that the results would be the same if the study were replicated with the same participants in the same context. Credibility can be ensured with the data trial (Polit & Beck 2014:599). In this study, the rules of the NGT were adhered to step-by-step procedures. The competency of the facilitator contributed to ensure the dependability of this study. The exploratory interview helped to ensure the dependability in this study (see section 5.3).

Confirmability refers to the objectivity or neutrality of the data and interpretations; that is, the potential for congruence between two or more independent people about the data's accuracy, relevance, or meaning. This is concerned with establishing that the data represent the information participants provided, and that the interpretations of those data are not invented by the researcher (Polit & Beck 2014:585). In order to achieve conformability, findings must reflect the participant's voice and the conditions of the inquiry, not the researcher biases, motivations or perspectives (Polit & Beck 2014:585). In this study, the facilitator was keeping a neutral position throughout the process of NGT. All the ideas were captured on the flip chart and visible to all the participants. The combined data was shared with the participants and they were actively involved in the analysis of the two NGT. The facilitator and participants did the coding and categorizing of each strategy. Two experts in qualitative analysis were involved to co-coding the themes and categories to enhance the quality of the data and the analysis thereof.

Transferability refers to the potential for extrapolation, that is, the extent to which findings can be transferred to or have applicability in other settings and groups (Polit & Beck 2014:585). In this study, the researcher ensured that the data was obtained correctly, the context and process followed were well described and a data trail left. This would assist other researchers to apply the results in similar contexts.

5.7 ETHICAL CONSIDERATIONS

When people are used as study respondents, care "must be exercised in ensuring that the rights of the respondents are protected" (Polit & Beck 2014:170). The researcher observed the ethical principles of informed consent, confidentiality and privacy, self-determination and beneficence in both phases of the study (De Vos et al., 2011:119).

Ethical approval and permission to conduct the study was obtained from the Research Ethics Committee, the Department of Health Studies at the University of South Africa (see Annexure 6). Institutional consent was obtained from the Addis Ababa City Administration Health Bureau and the institutional support letter was given to each public health centre to ensure that the required ethical standards were maintained (see Annexure 7).

Ethical approval was obtained from the Research Ethics Committee of the Department of Health Studies, University of South Africa (UNISA). The participants were invited by means of an official letter from Addis Ababa City Administration Health Bureau who acted as gatekeeper for the study. They were informed of the purpose of the study; that participation was voluntary and that their privacy, anonymity and confidentiality would be assured. Informed consent was obtained from all the nominal group participants (Annexure 5). The researcher informed the nominal group technique participants that participation was voluntary; that their privacy, anonymity and confidentiality would be assured, and that they could withdraw from the study at any time should they wish to do so.

The nominal groups were conducted in a small conference room to maintain privacy. The researcher also ensured that no data was shared with any other person, except the supervisor, who did not attend the nominal group. The data was stored in a lockable

cabinet and will be destroyed after the final result of the study is received from the University of South Africa (UNISA).

5.6 CONCLUSION

This chapter described the research methodology of phase 2, including the data-collection technique, namely the nominal group technique (NGT). The aim of the NGT was to identify strategies that could facilitate the implementation of an integrated family planning and HIV services at the public health centre level. The strategies formed the basis for the development of the strategic plan.

Chapter 6 discusses the data analysis and interpretation of phase 2 with reference to the literature reviewed.

CHAPTER SIX

PHASE 2: DATA COLLECTION AND ANALYSIS, AND INTERPRETATION

6.1 INTRODUCTION

Chapter 4 discussed the data analysis and interpretation and results of phase 1. This chapter discusses the data analysis and findings of the two nominal groups. The nominal group technique was used as a data collection instrument and the data was collected from the participants in two nominal group discussions. The nominal group discussions were conducted in two sessions. Session 1 shared information on the identification of challenges and opportunities. Session 2 identified strategies that could facilitate an integrated family planning and HIV services in public health centres and did multiple nominal group analysis and interpretation of the data.

The qualitative data was analysed by the participants themselves during the second session. The researcher and two co-coders, experts in qualitative data analysis, interpreted the data. Both nominal groups were analysed followed by a multiple group analysis (Roets & Lubbe 2015:154) to compile the data from both groups and identify the five most important priority strategies (see table 6.17). The findings are discussed with reference to the literature review.

6.2 PARTICIPANTS

The 24 programme officers who participated were divided into two nominal groups: 12 in the first group and 12 in the second group.

The first group consisted of 4 males and 8 females and the participants' average age was 39.5 years. Of the participants, 67% had a professional nursing background; 25% had professional expertise in public health, and 8% were medical doctors. The second group consisted of 2 males and 10 females and the average age was 37.8 years. Of the participants, 58% had a public health background; 33% had a professional nursing

background, and 9% were medical doctors. The groups were equally constituted to include similar categories of expertise in family planning and HIV programmes.

6.3 FINDINGS

Table 6.1 and table 6.2 list the ideas generated by the participants and the participants' individual statements.

Table 6.1 List of ideas generated by Group 1

SN	Individual statements
1	I would like to propose providing training for service providers can be a strategy to facilitate the integration of family planning and HIV services.
2	I suggest to provide a quality of training for service providers, including refresher training
3	Provide refresher training for care and support givers/clients would be the strategy
4	As per my experience women empowerment might be a strategy to facilitate the integration of family planning and HIV services at public health centre level
5	Capacitate the community such as WDA(Women development army (WDA)/Health development army (HDA) would be the strategy to facilitate the integration of family planning and HIV services
6	Capacity building of the family health team can be the strategy
7	I propose to develop guidelines to facilitate the integration of family planning and HIV services as a strategy to facilitate the integrated services
8	It would be good to consider the implementation of existing policies and other supporting guidelines
9	I guess arranging appropriate room/space could be the strategy
10	Build the infrastructure of the public health centres would be the strategy to facilitate the integrated family planning and HIV services.
11	Improve the infrastructure as a strategy to facilitate the integration of family planning and HIV services
12	Communication might be one of the strategies to facilitate the integration of family planning and HIV services
13	I may propose mass media use as a strategy to promote the integration of family planning and HIV services
14	Supply of sustainable family planning and HIV commodities would be one of the strategies
15	Availing resources can be the strategy
16	Monitoring and supervision can be one of the strategies to facilitate the integration of family planning and HIV services
17	Monitoring and evaluation might be the strategy to strengthen the integration
18	Conducting monthly review meeting helps to facilitate the integrated family planning and HIV services
19	Create conducive environment to facilitate the integrated family planning and HIV services
20	Strengthen family health team to inspire the integrated family planning and HIV services
21	Strengthen ownership might be a strategy
22	Coordination and partnership might be one of the strategies to facilitate the integration of family planning and HIV services

SN	Individual statements
23	Good counselling might facilitate the integrated family planning and HIV services
24	Improve service working hours (Avail 24 hours service and weekend service delivery)
25	I propose to extend the working hours of service provision at the public health centre level as a strategy
26	I propose that strengthening the referral system could be one of the strategy
27	Work with urban health extension workers to improve the referral system that might be the strategy to facilitate the integrated family planning and HIV services
28	Work closely with HDA/WHDA to enhance the referral system may be one of the strategies to facilitate the integration of family planning and HIV services
29	Hiring professional counsellors (para medicals or social workers) at the public health centres would be a good strategy to facilitate the integrated services.
30	I propose improving the ethics and discipline of service providers might be one of the strategies to facilitate both services
31	I consider that improving staff commitment as the strategy
32	Review the existing structure of BPR (Business planning reengineering) to facilitate the integrated family planning and HIV services
33	Improve male involvement might be one of the strategies to facilitate both services
34	Conducting research can be a strategy

Table 6.2 List of ideas generated by Group 2

SN	Individual statements
1	Developing the guidelines might be a good strategy
2	I would propose the development of curriculum guidelines on FP and HIV integration at higher institutions might be good strategy
3	Implementing policies to support strategies that might help to access the integrated services
4	I would say motivation and rewarding scheme can be one of the strategy to facilitate the integration
5	My observation is motivating health professionals can be one of the strategy
6	Establish burnout management system would be a strategy
7	My opinion is creating conducive environment can be a strategy to facilitate the integrated family planning and HIV services
8	Enable the integrated family planning and HIV services at the public health centre level as a strategy
9	Assign service providers to offer the integrated family planning and HIV services at the same place or same room with the same provider in single visit can be strategy
10	Assign service providers to provide the service for long duration after training help to facilitate the integration of family planning and HIV services
11	Assign the right person at the right place to facilitate the integrated family planning and HIV services
12	Strengthen ownership of the top and bottom level managers helps to sustain the integrated family planning and HIV services
13	Capacity building can be one of the strategy
14	I propose provide training on integrated family planning and HIV services as one of the strategy to facilitate the integration
15	Budget allocation would be one of the priority strategy
16	I would suggest to consider availing sustainable logistics as a strategy
17	I guess improving the human resources at the public health facility level can be a strategy to facilitate the integration of family planning and HIV services

SN	Individual statements
18	Women awareness should be one of the strategy to improve their capacity
19	I propose improve the awareness of clients at the community level might be the strategy
20	Development of IEC materials can be the strategy to improve the awareness regarding integrated family planning and HIV services
21	Improve media coverage to improve the awareness on integrated service
22	Avoid misconception and strong counselling on the integrated family planning and HIV services
23	Advocate and convince leaders on integration of family planning and HIV service can be strategy
24	Monitor the programme can be one of the strategy to facilitate the integrated services
25	Preparing an action plan could be one of the strategy
26	I propose monitoring and evaluation is priority strategy to facilitate integrated family planning and HIV services
27	I propose to involve private sector as a strategy
28	Involving all stakeholders for collaborative work can be the strategy
29	Strengthen referral system can be one of the strategies
30	Participate Health extension workers (HEWs) to strengthen the referral system

The facilitator facilitated the analysis process as the participants were actively involved in categorizing the individual statements into themes and categories. The first nominal group participants developed 12 themes that were supported by 21 categories from a list of 34 individual statements (see tables 6.1 and 6.3). The second nominal group participants developed 9 themes with 16 categories from a list of 30 individual statements (see tables 6.2 and 6.4).

The themes were then numbered and named as indicated in table 6.3 for the first nominal group and table 6.4 for the second nominal group.

Table 6.3 Themes and categories identified by Group 1

Themes	Categories	Individual statements
Capacity building	Training	I would like to propose providing training for service providers can be a strategy to facilitate the integration of family planning and HIV services.
		I suggest to provide a quality of training for service providers, including refresher training
		Provide refresher training for care and support givers/clients would be the strategy
	Women empowerment	As per my experience women empowerment might be a strategy to facilitate the integration of family planning and HIV services at public health centre level
		Capacitate the community such as WDA(Women development army (WDA)/Health development army (HDA) would be the strategy to facilitate the integration of family planning and HIV services

Themes	Categories	Individual statements
	Family Health Team	Capacity building of the family health team can be the strategy
Implementing policies and guidelines	Guidelines	I propose to develop guidelines to facilitate the integration of family planning and HIV services as a strategy to facilitate the integrated services
	Policies	It would be good to consider the implementation of existing policies and other supporting guidelines
Infrastructure	Improve infrastructure	I guess arranging appropriate room/space could be the strategy
		Build the infrastructure of the public health centres would be the strategy to facilitate the integrated family planning and HIV services.
		Improve the infrastructure as a strategy to facilitate the integration of family planning and HIV services
Advocacy/awareness	Communication	Communication might be one of the strategies to facilitate the integration of family planning and HIV services
	Promotion	I may propose mass media use as a strategy to promote the integration of family planning and HIV services
Medical resources	Availably of medical resources	Supply of sustainable family planning and HIV commodities would be one of the strategies
		Availing resources can be the strategy
Monitoring and evaluation	supervision	Monitoring and supervision can be one of the strategies to facilitate the integration of family planning and HIV services
	Evaluation	Monitoring and evaluation might be the strategy to strengthen the integration
	Review meetings	Conducting monthly review meeting helps to facilitate the integrated family planning and HIV services
Leadership and management	Enabling environment	Create conducive environment to facilitate the integrated family planning and HIV services
	Motivation	Strengthen family health team to inspire the integrated family planning and HIV services
	Ownership	Strengthen ownership might be a strategy
Partnership	Coordination	Coordination and partnership might be one of the strategies to facilitate the integration of family planning and HIV services
Services	Counselling services	Good counselling might facilitate the integrated family planning and HIV services
	Service delivery hours	Improve service working hours (Avail 24 hours service and weekend service delivery)
		I propose to extend the working hours of service provision at the public health centre level as a strategy
Referral	Strengthening referral system	I propose that strengthening the referral system could be one of the strategy
		Work with urban health extension workers to improve the referral system that might be the strategy to facilitate the integrated family planning and HIV services
		Work closely with HDA/WHDA to enhance the referral system may be one of the strategies to facilitate the

Themes	Categories	Individual statements
		integration of family planning and HIV services
Human resource	Improve human resource	Hiring professional counsellors (para medicals or social workers) at the public health centres would be a good strategy to facilitate the integrated services.
		I propose improving the ethics and discipline of service providers might be one of the strategies to facilitate both services
		I consider that improving staff commitment as the strategy
		Review the existing structure of BPR (business planning reengineering) to facilitate the integrated family planning and HIV services
Male involvement	Improve male involvement	Improve male improvement might be one of the strategies to facilitate both services
Research	Conduct research	Conducting research can be a strategy

Table 6.4 Themes and categories identified by Group 2

Themes	Categories	Individual statements
Implementing policies and guidelines	Guidelines	Developing the guidelines might be good strategy
		I would propose the development of curriculum guideline on FP and HIV integration at higher institution might be good strategy
	Policies	Implementing policies to support strategies that might help to access the integrated services
Leadership and management	Motivation	I would say motivation and rewarding scheme can be one of the strategy to facilitate the integration
		My observation is motivating health professionals can be one of the strategy
		Establish burnout management system would be a strategy
	Enabling environment	My opinion is creating conducive environment can be a strategy to facilitate the integrated family planning and HIV services
		Enable the integrated family planning and HIV services at the public health centre level as a strategy
	Deployment	Assign service providers to offer the integrated family planning and HIV services at the same place or same room with the same provider in single visit can be strategy
		Assign service providers to provide the service for long duration after training help to facilitate the integration of family planning and HIV services
		Assign the right person at the right place to facilitate the integrated family planning and HIV services
	Ownership	Strengthen ownership of the top and bottom level managers helps to sustain the integrated family planning and HIV services
Capacity building	Improve capacity building	Capacity building can be one of the strategy
	Training	I propose provide training on integrated family planning and HIV services as one of the strategy to facilitate the integration
Fiscal resources	Avail fiscal resources	Budget allocation would be one of the priority strategy
Medical resources	Availability of medical resources	I would suggest to consider availing sustainable logistics as a strategy
Human resources	Improve human resources	I guess improving the human resources at the public health facility level can be a strategy to facilitate the integration of

Themes	Categories	Individual statements
		family planning and HIV services
Advocacy/awareness	Knowledge	Women awareness should be one of the strategy to improve their capacity
		I propose improve the awareness of clients at the community level might be the strategy
		Development of IEC materials can be the strategy to improve the awareness regarding integrated family planning and HIV services
		Improve media coverage to improve the awareness on integrated service
		Avoid misconception and strong counselling on the integrated family planning and HIV services
	Influence leaders	Advocate and convince leaders on integration of family planning and HIV service can be strategy
Monitoring and Evaluation	Monitoring	Monitor the programme can be one of the strategy to facilitate the integrated services
	Planning	Preparing an action plan could be one of the strategy
	Evaluation	I propose monitoring and evaluation is priority strategy to facilitate integrated family planning and HIV services
Partnership	Involve stakeholders	I propose to involve private sector as a strategy
		Involving all stakeholders for collaborative work can be the strategy
Referral system	Strengthening referral system	Strengthen referral system can be one of the strategies
		Participate Health extension workers (HEWs) to strengthen the referral system

Tables 6.5 (group 1) and 6.6 (group 2), respectively, ranked the themes to identify the most important themes from each group and allow for accurate information to conduct the multiple group analysis. The top 5 ranked themes (marked in blue) were used to do the multiple group analysis

Table 6.5 Ranked themes by Group 1

Order of priority	Themes voted as the most important	Marks and scored
1	Capacity building	5,5,5,5,5,5,5,4,4,4,4,4=55
2	Implementing policies and guidelines	5,5,4,4,3,2,2,1=25
3	Infrastructure	5,3,3,3,2,2,1=19
4	Advocacy/awareness	5,3,3,1,5=17
5	Monitoring and evaluation	4,3,2,1,1,1,3=15
6	Leadership and management	4,3,2,1,2=12
7	Partnership	3,2,2,1,2=10
8	Service	4,2,2=8
9	Referral	3,3,1=7
10	Human resources	4=4
11	Male involvement	4=4
12	Research	1,1,1=3

Table 6.6 Ranked themes by Group 2

Order of priority	Themes voted as the most important	Marks and scored
1	Implementing policies and guidelines	2,5,5,5,5,5,5,5,5,5,5=47
2	Leadership and management	1,1,2,2,2,3,3,4,4,4,5,5=36
3	Capacity building	1,1,2,2,3,3,3,4,4,4,5=32
4	Fiscal resources	1,1,2,2,3,3,3,4,4,4=27
5	Medical resources	1,2,2,3,3,4=15
6	Advocacy/awareness	1,3,3,4=11
7	Monitoring and evaluation	1,1,1,1,2,2=8
8	Partnership	4=4
9	Referral	0

6.4 MULTIPLE NOMINAL GROUP ANALYSIS

The researcher and two co-coders did the multiple group analysis in order to combine the findings from group 1 and group 2. Roets & Lubbe's (2015:154) steps of multiple group analysis were then followed. The key steps of multiple group analysis are discussed next.

6.4.1 Create an initial spread sheet on an MS Word document

A table with eight columns was created in MS Word to record the individual statements, categories and themes by each nominal group. The eight columns were indicated A to H in the first row of the table (see table 6.7). The researcher and co-coders entered the records of both nominal groups from the flip chart to the table titled G1 for the first nominal group and G2 for the second nominal group as indicated in first column of the tables (see table 6.7).

Table 6.7 Table recording individual themes, categories and statements

A: Name of the group	B: number of selected theme	C: Theme	D: Categories	E: Individual statements	F: scores (for the themes)	G: Average scores (E/number of participants)	H: Top 5
G1	1						
G1	1						
G1	1						

6.4.2 Identify the top 5 themes from each nominal group

After listing the individual statements, categories and themes, the researcher and co-coders identified the top five themes, using an electronic word document for each group. The researcher and co-coders checked and marked “X” for the identified themes ranked as top five by each nominal group. All top five themes were marked “X” in column H in group 1. The researcher and co-coders ensured that all the top five themes were recorded correctly in group 1. They selected all the columns and rows and sorted them in descending order in column H to ensure all top five themes marked “X” in the top in column H (see tables 6.8 and 6.9).

Table 6.8 Top five themes identified by Group 1

A: Name of the group	B: Code number of the theme	C: Themes	D: Categories	E: Individual statements	F: scores (for the themes	G: Average scores (E/No. of participants)	H: Top 5
G1	1	Capacity building	Training	I would like to propose providing training for service providers can be a strategy to facilitate the integration of family planning and HIV services	55	4.58	X
				I suggest to provide a quality of training for service providers, including refresher training			
				Provide refresher training for care and support givers/clients would be the strategy			
			Women empowerment	As per my experience women empowerment might be a strategy to facilitate the integration of family planning and HIV services at public health centre level			
				Capacitate the community such as WDA(Women development army (WDA)/Health development army (HDA) would be the strategy to facilitate the integration of family planning and HIV services			
			Family health team	Capacity building of the family health team can be the strategy			
	2	Monitoring and evaluation	supervision	Monitoring and supervision can be one of the strategies to facilitate the integration of family planning and HIV services	15	1.25	X
			Evaluation	Monitoring and evaluation might be the strategy to strengthen the integration			
	3	Advocacy/awareness	Communication	Communication might be one of the strategies to facilitate the integration of family planning and HIV services	17	1.42	X
			Promotion	I may propose mass media use as a strategy to			

A: Name of the group	B: Code number of the theme	C: Themes	D: Categories	E: Individual statements	F: scores (for the themes	G: Average scores (E/No. of participants)	H: Top 5
				promote the integration of family planning and HIV services			
	4	Medical resources	Availability of medical resources	Supply of sustainable family planning and HIV commodities would be one of the strategies	19	1.58	X
				Making resources available can be the strategy			
	5	Infrastructure	Improve infrastructure	I guess arranging appropriate room/space cold be the strategy	19	1.58	X
				Build the infrastructure of the public health centres would be the strategy to facilitate the integrated family planning and HIV services.			
				Improve the infrastructure as a strategy to facilitate the integration of family planning and HIV services			
	7	Implementing policies and guidelines	Guidelines	I propose to develop guidelines to facilitate the integration of family planning and HIV services as a strategy to facilitate the integrated services	25	2.08	X
			Policies	It would be good to consider the implementation of existing policies and other supporting guidelines			
	9	Human resources	Improve human resources	Hiring professional counsellors (para medicals or social workers) at the public health centres would be a good strategy to facilitate the integrated services.	4	0.33	
				I propose improving the ethics and discipline of service providers might be one of the strategies to facilitate both services			
				I consider that improving staff commitment as the strategy			
				Review the existing structure of BPR (business planning reengineering) to facilitate the integrated family planning and HIV services			

A: Name of the group	B: Code number of the theme	C: Themes	D: Categories	E: Individual statements	F: scores (for the themes	G: Average scores (E/No. of participants)	H: Top 5
	10	Referral system	Strengthening referral system	I propose that strengthening the referral system could be one of the strategy	7	0.58	
				Work with urban health extension workers to improve the referral system that might be the strategy to facilitate the integrated family planning and HIV services			
				Work closely with HDA/WHDA to enhance the referral system may be one of the strategies to facilitate the integration of family planning and HIV services			
	11	Male involvement	Improve male involvement	Improve male improvement might be one of the strategies to facilitate both services	4	0.33	
	12	Services	Counselling services	Good counselling might facilitate the integrated family planning and HIV services	8	0.67	
			Service delivery hours	Improve service working hours (Avail 24 hours service and weekend service delivery)			
				I propose to extend the working hours of service provision at the public health centre level as a strategy			
	13	Partnership	Coordination	Coordination and partnership might be one of the strategies to facilitate the integration of family planning and HIV services	10	0.83	
	14	Research	Conduct research	Conducting research can be a strategy	3	0.25	
	2	Monitoring and evaluation	Review meetings	Conducting monthly review meeting helps to facilitate the integrated family planning and HIV services	15	1.25	
	6	Leadership and management	Enabling environment	Create conducive environment to facilitate the integrated family planning and HIV services	12	1.00	
			Motivation	Strengthen family health team to inspire the integrated family planning and HIV services			
			Ownership	Strengthen ownership might be a strategy			

The researcher and co-coders then identified the top five themes for Group 2.

Table 6.9 Top five themes identified by nominal Group 2

A: Name of the group	B: Code number of the theme	C: Themes	D: Categories	E:Individual statements	F: scores (for the themes	G:Average scores (E/No. of participants)	H: Top 5
G2	1	Capacity building	Improve capacity building	Capacity building can be one of the strategy	32	2.67	X
	8	Fiscal resources	Avail fiscal resources	Budget allocation would be one of the priority strategy	27	2.25	X
	4	Medical resources	Availability of medical resources	I would suggest to consider availing sustainable logistics as a strategy	15	1.25	X
	9	Human resources	Improve human resources	I guess improving the human resources at the public health facility level can be a strategy to facilitate the integration of family planning and HIV services	15	1.25	X
	6	Leadership and management	Motivation	I would say motivation and rewarding scheme can be one of the strategy to facilitate the integration	36	3.0	X
				My observation is motivating health professionals can be one of the strategy			
				Establish burnout management system would be a strategy			
			Enabling environment	My opinion is creating conducive environment can be a strategy to facilitate the integrated family planning and HIV services			
				Enable the integrated family planning and HIV services at the public health center level as a strategy			
			Deployment	Assign service providers to offer the integrated family planning and HIV services at the same place or same room with the same provider in single visit can be strategy			
				Assign service providers to provide the service for long duration after training help to facilitate the integration of family planning and HIV services			

A: Name of the group	B: Code number of the theme	C: Themes	D: Categories	E:Individual statements	F: scores (for the themes	G:Average scores (E/No. of participants)	H: Top 5
				Assign the right person at the right place to facilitate the integrated family planning and HIV services			
			Ownership	Strengthen ownership of the top and bottom level managers helps to sustain the integrated family planning and HIV services			
	7	Implementing policies and guidelines	Guidelines	Developing the guidelines might be good strategy	47	3.92	X
			Policies	I would propose the development of curriculum guideline on FP and HIV integration at higher institution might be good strategy			
				Implementing policies to support strategies that might help to access the integrated services			
	1	Capacity building	Training	I propose provide training on integrated family planning and HIV services as one of the strategy to facilitate the integration	32	2.67	
	2	Monitoring and evaluation	Monitoring	Monitor the programme can be one of the strategy to facilitate the integrated services	8	0.67	
			Planning	Preparing an action plan could be one of the strategy			
			Evaluation	I propose monitoring and evaluation is priority strategy to facilitate integrated family planning and HIV services			
	3	Advocacy/awareness	Knowledge	Women awareness should be one of the strategy to improve their capacity	11	0.92	
				I propose improve the awareness of clients at the community level might be the strategy			
				Development of IEC materials can be the strategy to improve the awareness regarding integrated family planning and HIV services			
				Improve media coverage to improve the awareness on integrated service			
				Avoid misconception and strong counselling on the integrated family planning and HIV services			
			Influence leaders	Advocate and convince leaders on integration of family			

A: Name of the group	B: Code number of the theme	C: Themes	D: Categories	E:Individual statements	F: scores (for the themes	G:Average scores (E/No. of participants)	H: Top 5
				planning and HIV service can be strategy			
	13	Partnership	Involve stakeholders	I propose to involve private sector as a strategy Involving all stakeholders for collaborative work can be the strategy	4	0. 33	
	10	Referral system	Strengthening referral system	Strengthen referral system can be one of the strategies Participate health extension workers (HEWs) to strengthen the referral system	0	0	

6.4.3 Content analysis of the data

In this step, the researcher and co-coders checked the correctness of categorizing the individual statements with themes and categories done by nominal group participants and ensured that no individual statement was missed. All the themes were established by grouping categories and individual statements together that addressed similar ideas. The researcher and co-coders made few revisions in the wording of the categories and themes to make sure that each individual statement aligned with the correct categories and themes. The team double checked the alignment of each individual statement with each category and themes and were satisfied with categorization of the individual statements.

6.4.4 Calculating combined ranking to gain consolidated and prioritized list

The researcher and co-coders merged nominal group 1 and nominal group 2 by copying and pasting all the records of both group 1 and group 2 including top five and other themes to a new document. Then the researcher and co-coders selected all columns and rows and sorted in descending order in column H to ensure all top five themes marked “X” were listed in the top in column H for both groups (see table 6.10).

Table 6.10 Combined ranking of top five themes identified by Group 1 and Group 2

A: Name of the group	B: Code number of the theme	C: Themes	D: Categories	E: Individual statements	F: scores (for the themes	G: Average scores (E/No. of participants)	H: Top 5
G1	1	Capacity building	Training	I would like to propose providing training for service providers can be a strategy to facilitate the integration of family planning and HIV services.	55	4.58	X
				I suggest to provide a quality of training for service providers, including refresher training			
				Provide refresher training for care and support givers/clients would be the strategy			
			Women empowerment	As per my experience women empowerment might be a strategy to facilitate the integration of family planning and HIV services at public health centre level			
				Capacitate the community such as WDA(Women development army (WDA)/Health development army (HDA) would be the strategy to facilitate the integration of family planning and HIV services			
			Family health team	Capacity building of the family health team can be the strategy			
	2	Monitoring and evaluation	Supervision	Monitoring and supervision can be one of the strategies to facilitate the integration of family planning and HIV services	15	1.25	X
			Evaluation	Monitoring and evaluation might be the strategy to strengthen the integration			
	3	Advocacy/awareness	Communication	Communication might be one of the strategies to facilitate the integration of family planning and HIV services	17	1.42	X
			Promotion	I may propose mass media use as a strategy to promote the integration of family planning and HIV services			
	4	Medical resources	Availability of medical resources	Supply of sustainable family planning and HIV commodities would be one of the strategies	19	1.58	X
				Availing resources can be the strategy			

A: Name of the group	B: Code number of the theme	C: Themes	D: Categories	E: Individual statements	F: scores (for the themes	G: Average scores (E/No. of participants)	H: Top 5
	5	Infrastructure	Improve infrastructure	I guess arranging appropriate room/space cold be the strategy	19	1.58	X
				Build the infrastructure of the public health centres would be the strategy to facilitate the integrated family planning and HIV services.			
				Improve the infrastructure as a strategy to facilitate the integration of family planning and HIV services			
	7	Implementing Policies and guidelines	Guidelines	I propose to develop guidelines to facilitate the integration of family planning and HIV services as a strategy to facilitate the integrated services	25	2.08	X
			Policies	It would be good to consider the implementation of existing policies and other supporting guidelines			
G2	1	Capacity building	Improve capacity building	Capacity building can be one of the strategy	32	2.67	X
	8	Fiscal resources	Avail fiscal resources	Budget allocation would be one of the priority strategy	27	2.25	X
	4	Medical resources	Availability of medical resources	I would suggest to consider availing sustainable logistics as a strategy	15	1.25	X
	9	Human resources	Improve human resources	I guess improving the human resources at the public health facility level can be a strategy to facilitate the integration of family planning and HIV services	15	1.25	X
	6	Leadership and management	Motivation	I would say motivation and rewarding scheme can be one of the strategy to facilitate the integration	36	3.0	X
				My observation is motivating health professionals can be one of the strategy			
				Establish burnout management system would be a strategy			
			Enabling environment	My opinion is creating conducive environment can be a strategy to facilitate the integrated family planning and HIV services			
				Enable the integrated family planning and HIV services at the public health centre level as a strategy			
			Deployment	Assign service providers to offer the integrated family planning and HIV services at the same place or same room with the same provider in single visit can be strategy			

A: Name of the group	B: Code number of the theme	C: Themes	D: Categories	E: Individual statements	F: scores (for the themes	G: Average scores (E/No. of participants)	H: Top 5
				Assign service providers to provide the service for long duration after training help to facilitate the integration of family planning and HIV services			
				Assign the right person at the right place to facilitate the integrated family planning and HIV services			
			Ownership	Strengthen ownership of the top and bottom level managers helps to sustain the integrated family planning and HIV services			
	7	Implementing policies and guidelines	Guidelines	Developing the guidelines might be good strategy	47	3.92	X
			Policies	I would propose the development of curriculum guideline on FP and HIV integration at higher institution might be good strategy			
				Implementing policies to support strategies that might help to access the integrated services			
G1	9	Human resources	Improve human resources	Hiring professional counsellors (para medicals or social workers) at the public health centres would be a good strategy to facilitate the integrated services.	4	0.33	
				I propose improving the ethics and discipline of service providers might be one of the strategies to facilitate both services			
				I consider that improving staff commitment as the strategy			
				Review the existing structure of BPR (Business planning reengineering) to facilitate the integrated family planning and HIV services			
	10	Referral system	Strengthening referral system	I propose that strengthening the referral system could be one of the strategy	7	0.58	
				Work with urban health extension workers to improve the referral system that might be the strategy to facilitate the integrated family planning and HIV services			
				Work closely with HDA/WHDA to enhance the referral system may be one of the strategies to facilitate the integration of family planning and HIV services			

A: Name of the group	B: Code number of the theme	C: Themes	D: Categories	E: Individual statements	F: scores (for the themes	G: Average scores (E/No. of participants)	H: Top 5
	11	Male involvement	Improve male involvement	Improve male improvement might be one of the strategies to facilitate both services	4	0.33	
	12	Services	Counselling services	Good counselling might facilitate the integrated family planning and HIV services	8	0.67	
			Service delivery hours	Improve service working hours (Avail 24 hours service and weekend service delivery)			
				I propose to extend the working hours of service provision at the public health centre level as a strategy			
	13	Partnership	Coordination	Coordination and partnership might be one of the strategies to facilitate the integration of family planning and HIV services	10	0.83	
	14	Research	Conduct research	Conducting research can be a strategy	3	0.25	
	2	Monitoring and evaluation	Review meeting	Conducting monthly review meeting helps to facilitate the integrated family planning and HIV services	15	1.25	
	6	Leadership and management	Enabling environment	Create conducive environment to facilitate the integrated family planning and HIV services	12	1.00	
			Motivation	Strengthen family health team to inspire the integrated family planning and HIV services			
			Ownership	Strengthen ownership might be a strategy			
G2	1	Capacity building	Training	I propose provide training on integrated family planning and HIV services as one of the strategy to facilitate the integration	32	2.67	
	2	Monitoring and evaluation	Monitoring	Monitor the program can be one of the strategy to facilitate the integrated services	8	0.67	
			Planning	Preparing an action plan could be one of the strategy			
			Evaluation	I propose monitoring and evaluation is priority strategy to facilitate integrated family planning and HIV services			
	3	Advocacy/awareness	Knowledge	Women awareness should be one of the strategy to improve their capacity	11	0.92	
				I propose improve the awareness of clients at the			

A: Name of the group	B: Code number of the theme	C: Themes	D: Categories	E: Individual statements	F: scores (for the themes	G: Average scores (E/No. of participants)	H: Top 5
				community level might be the strategy			
				Development of IEC materials can be the strategy to improve the awareness regarding integrated family planning and HIV services			
				Improve media coverage to improve the awareness on integrated service			
				Avoid misconception and strong counselling on the integrated family planning and HIV services			
			Influence leaders	Advocate and convince leaders on integration of family planning and HIV service can be strategy			
	13	Partnership	Involve stakeholders	I propose to involve private sector as a strategy	4	0.33	
				Involving all stakeholders for collaborative work can be the strategy			
	10	Referral system	Strengthening referral system	Strengthen referral system can be one of the strategies	0	0	

6.4.5 Finalise ranking

A step-by-step ranking process was done by the researcher and co-coders as described below.

Step 1: Create a new data sheet

The researcher and co-coders created a new data sheet and copied and pasted all the themes marked “X” to it (see table 6.11). Table 6.11 was filled as follows:

- Column 1: The number and name of the theme that was created and only marked with “X”
- Column 2: Add up how many “X” appear in column H of table 6.10 the lists of individual statements per theme.
- Column 3: Leave it open at this step
- Column 4: Add up the number of individual statements that fall into themes; those without and with “X” mark
- Column 5: Leave it open at this stage
- Column 6: Total the average scores of individual statements (sum of column G per theme; table 6.10 in a specific strategy divided by the sum of the number of individual statements (column E in table 6.10) in each theme.

Table 6.11 Data sheet to complete step 1 ranking

1. Number and name of theme	2. Top 5: 1	3. Top 5: 2	4. Number of individual statement per theme: 1	5. Number of individual statement per theme: 2	6. Average: 1	7. Average: 2	8. Final rank
1. Capacity building	7		8		4.10		
2. Monitoring and evaluation	2		6		0.96		
3. Advocacy and awareness	2		8		1.04		
4. Medical resources	3		3		1.47		
5. Infrastructure	3		3		2.05		
6. Leadership and management	9		12		2.5		
7. Implementing policies and guidelines	5		5		3.18		
8 .Fiscal resources	1		1		2.25		
9. Human resources	1		5		0.51		

Step 2: Sorting column 2

The researcher and co-coders highlighted the data sheet and sorted it according to column 2 (Top 5:1) in ascending order (see table 6.12).

Step 3: First ranking

The researcher and co-coders typed numbers 1, 2, 3, etc in column 3 from the first theme to the end of the list in the table. The numbers in column 2 and in column 3 were compared. If there were similar scores both columns, the scores were adjusted and replaced by the average scores (see table 6.12).

Table 6.12 First ranking

1. Number and name of theme	2. Top 5: 1	3. Top 5: 2	4. Number of individual statement per theme: 1	5. Number of individual statement per theme: 2	6. Average: 1	7. Average: 2	8. Final rank
8. Fiscal resources	1	1=1.5	1		2.25		
9. Human resources	1	2=1.5	5		0.51		
2. Monitoring and evaluation	2	3=3.5	6		0.96		
3. Advocacy and awareness	2	4=3.5	8		1.04		
4. Medical resources	3	5=5.5	3		1.47		
5. Infrastructure	3	6=5.5	3		2.05		
7. Implementing policies and guidelines	5	7	5		3.18		
1. Capacity building	7	8	8		4.10		
6 .Leadership and management	9	9	12		2.5		

Step 4: Averaging scores in column 3

The researcher and co-coders selected and highlighted the columns and rows and arranged the statements in ascending order according to column 4 on the data sheet (see table 6.13).

Step 5: Second ranking

The researcher and co-coders repeated the first ranking process in column 4 and column 5 (see table 6.13).

Table 6.13 Second ranking

1. Number and name of theme	2.Top 5: 1	3. Top 5: 2	4. Number of individual statement per theme: 1	5. Number of individual statement per theme: 2	6. Average: 1	7. Average: 2	8. Final rank
8. Fiscal resources	1	1=1.5	1	1	2.25		
4. Medical resources	3	5=5.5	3	2=2.5	1.47		
5. Infrastructure	3	6=5.5	3	3=2.5	2.05		
9. Human resources	1	2=1.5	5	4=4.5	0.51		
7. Implementing policies and guidelines	5	7	5	5=4.5	3.18		
2. Monitoring and evaluation	2	3=3.5	6	6	0.96		
3. Advocacy and awareness	2	4=3.5	8	7=7.5	1.04		
1. Capacity building	7	8	8	8=7.5	4.10		
6. Leadership and management	9	9	12	9	2.5		

The researcher and co-coders highlighted the contents of the spreadsheet and arranged column 6 in ascending order and finalized this step (see table 6.14).

Step 6: Third ranking

After column 6 was sorted again the researcher and co-coders entered numbers from 1-9 in column 7 as the third rank order. Table 6.14 presents the third ranking.

Table 6.14 Third ranking

1. Number and name of theme	2. Top 5: 1	3. Top 5: 2	4. Number of individual statement per theme: 1	5. Number of individual statement per theme: 2	6. Average: 1	7. Average: 2	8. Final rank
9. Human resources	1	1.5	5	4.5	0.51	1	
2. Monitoring and evaluation	2	3.5	6	6	0.96	2	
3. Advocacy and awareness	2	3.5	8	7.5	1.04	3	
4. Medical resources	3	5.5	3	2.5	1.47	4	
5. Infrastructure	3	5.5	3	2.5	2.05	5	
8. Fiscal resources	1	1.5	1	1	2.25	6	
6. Leadership and management	9	9	12	9	2.5	7	
7. Implementing policies and guidelines	5	7	5	4.5	3.18	8	
1. Capacity building	7	8	8	7.5	4.10	9	

If column 6 contained identical values, the researcher and co-coders adapted the column 7 values using the same process as step 3 (see section 6.4.5) and ranked the higher numbers as the greater importance of the two nominal groups.

Step 7: Final ranking

The researcher and co-coders added ranks of columns 3, 5 and 7 and typed in column 8. This was the final ranking (see table 6.15).

Table 6.15 Final ranking

1. Number and name of theme	2. Top 5: 1	3. Top 5: 2	4. Number of individual statement per theme: 1	5. Number of individual statement per theme: 2	6. Average: 1	7. Average: 2	8. Final rank
9. Human resources	1	1.5	5	4.5	0.51	1	7
2. Monitoring and evaluation	2	3.5	6	6	0.96	2	11.5
3. Advocacy and awareness	2	3.5	8	7.5	1.04	3	14
4. Medical resources	3	5.5	3	2.5	1.47	4	12
5. Infrastructure	3	5.5	3	2.5	2.05	5	13
8. Fiscal resources	1	1.5	1	1	2.25	6	8.5
6. Leadership and management	9	9	12	9	2.5	7	25
7. Implementing policies and guidelines	5	7	5	4.5	3.18	8	19.5
1.Capacity building	7	8	8	7.5	4.10	9	24.5

The researcher and co-coders selected all the columns and rows on the data sheet and ranked them in descending order according to column 8 to select the five top themes. Table 6.16 presents the final ranking of themes in the study and table 6.17 indicates the final ranked top five themes.

Table 6.16 Final ranking of top five themes

1. **Number and name of theme**	**2. Top 5: 1**	**3. Top 5: 2**	**4. Number of individual statement per theme: 1**	**5. Number of individual statement per theme: 2**	**6. Average: 1**	**7. Average: 2**	**8. Final rank**
6. Leadership and management	9	9	12	9	2.5	7	25
1. Capacity building	7	8	8	7.5	4.10	9	24.5
7. Implementing policies and guidelines	5	7	5	4.5	3.18	8	19.5
3. Advocacy and awareness	2	3.5	8	7.5	1.04	3	14
5. Infrastructure	3	5.5	3	2.5	2.05	5	13
4. Medical resources	3	5.5	3	2.5	1.47	4	12
2. Monitoring and evaluation	2	3.5	6	6	0.96	2	11.5
8. Fiscal resources	1	1.5	1	1	2.25	6	8.5
9. Human resources	1	1.5	5	4.5	0.51	1	7

Table 6.17 Final ranked five top themes (outputs)

Order of priority	**Five themes voted as the most important strategies**	**Marks scored**
1	Leadership and management	25
2	Capacity building	24.5
3	Implementing policies and guidelines	19.5
4	Advocacy/awareness	14
5	Infrastructure	13

6.5 DATA INTERPRETATION AND LITERATURE CONTROL

This section discusses the five most important themes called strategies ranked as top priorities. Nickols (2016:3) refers to a strategy as a general plan of action for achieving one's goals and objectives. In this study, the strategy referred to the plan of action to

facilitate the integration of family planning and HIV services at the public health centre level in Addis Ababa.

According to WHO (2016f) the key strategic considerations to facilitate the integration of family planning and HV services to provide quality service include strong leadership and management to decide the type of family planning and HIV services to be integrated and the extent to which they should be integrated to determine adequate resources and arrange the facility setup. Technical capacities, policy environment and adequate resources are also needed to establish and sustain high-quality integrated services (WHO 2016f; 2015g; 2017c). Improved monitoring and evaluation is needed to measure programme success and inform programme or service delivery improvement, replication, or scale-up at all levels (WHO 2016f; 2017c). Table 6.17 indicates that the five most important strategies were leadership and management; capacity building; implementation of policies and guidelines, advocacy/awareness, and infrastructure.

6.5.1 Leadership and management

Cox (2016:155-156) describes leadership as a process of influencing people to inspire, structure, and facilitate activities and relationships in a team or organization. Leaders should be visionary and have the capacity to inspire people and realize their vision through innovative strategies and leadership, and good negotiators to generate the necessary resources to achieve their goals (WHO 2016f).

According to West, Armit, Loewenthal et al. (2015:8) leaders should have technical, conceptual and interpersonal skills to achieve their goals. Technical skill includes knowledge of the organization's strategy, structure and processes of the organization, health care services and organizational environment (West et al., 2015:8). Conceptual skill allows leaders to understand the complex environment of the organization to find solutions and helps to analyse, plan and make decisions about the organizational functioning (West et al., 2015:8). Interpersonal skill is vital to understand the followers' needs and emotional reactions and monitor the effects of their own behaviours (West et al., 2015:8).

Management refers to the process used to accomplish organisational goals through organisational functions of planning, organizing, leading, and controlling people and

other resources (Cox 2016:155-56). Cox (2016:155-56) identifies three levels of management: top, middle and bottom level. Top level managers are mainly responsible for the development of strategic plans for the organization; middle level managers are responsible for making sure tasks are completed through supervising, organizing, and monitoring day-to-day activity. Bottom level managers are accountable to middle level managers and assist in ensuring their subordinates perform as expected.

The WHO (2016f) states that management and leadership is one of the key factors for the delivery of quality health services at health facilities. The effectiveness of the organization can be ensured through good management and leadership.

Good leadership and management and strong commitment from organizations and partners are essential to facilitate change and achieve better health services. Achievement of the sustainable development goals (SDGs) depends on creative and responsible deployment of people and other resources, especially in low-income countries like Ethiopia Efficient, (WHO 2016f). In this study, the nominal groups identified leadership and management as the first priority strategy to facilitate the integration of family planning and HIV services. Strong leadership and management are essential inputs for effective and efficient integration of family planning and HIV services at the heath facility level (MOH Jamaica 2016:81). An effective plan of action regarding leadership and management should be in place to facilitate the implementation of an integrated family planning and HIV services.

6.5.3 Capacity building

The capacity of service providers to render quality care should be optimised; therefore, capacity building is a crucial aspect of a strategic plan. Capacity building refers to any specific action or series of actions that improves individuals', organizations', or systems' effectiveness, including quality service delivery to create positive change and improve health outcomes (Management Science for Health [MSH] 2016). The WHO (2016e; 2016b) emphasises that provision of training for service providers is one of the capacity building processes to improve the quality of health care services. In this study, the participants ranked capacity building for service providers as the second priority strategy to facilitate the integration of family planning and HIV services at the public health centre level in Addis Ababa.

USIAD (2016) describes providing training for service providers as one of the strategies to assure the quality of health care services, including integrated family planning and HIV services. The skill required by service providers in developing countries is to offer the major maternal and child health services such as integrated family planning and HIV services (USAID 2015a:25). In Ethiopia, service providers attend some practical skills in maternal health services, including family planning and HIV services, during pre-service and in-service training (MOH Ethiopia 2012).

Capacity building includes client empowerment. According to the International Planned Parenthood Federation (IPPF 2015:3), health care services should be based on the client-centred approach to capacitate or empower clients. This includes choice of service, information, technical competence, interpersonal relations, continuity and constellation of services. Public health centres must be client-focused and should empower and involve clients and ensure high quality health care services and continuity of the integrated service utilization (IPPF 2015:11). The concept of client empowerment indicates the involvement or engagement or activation of clients in the services they receive (All Party Parliamentary Groups on Global Health; HIV/AIDs; Population, Development and Reproductive Health; Global Tuberculosis; and Patient and Public Involvement in Health and Social Care [APPG] 2015:8). Establishing a feedback mechanism to receive comments and suggestions from clients at the health facilities might help to respond appropriately (IPPF 2015:11). Involving clients in their own care is a capacity-building process that contributes to improved quality and is vital to the sustainability of health systems around the world. Client empowerment is also seen as a solution to many of the challenges of healthcare services (APPG 2015:9). A strategic plan should be developed regarding capacity building to facilitate the implementation of an integrated family planning and HIV services.

6.5.4 Implementing policies and guidelines

The World Health Organization (WHO) recommends that services should be integrated to address the needs of people and communities, and empower people to improve their own health through universal health coverage (WHO 2016h; 2016g). The WHO regularly develops policy briefs and guidelines to assist member countries to develop their own national strategies and guidelines to facilitate the provision of integrated

health services (WHO 2016a; 2016h). In this study, the NG participants ranked implementing policies and guidelines as the third priority strategy to facilitate the integration of family planning and HIV services at the public health centre level.

Policies and guidelines must be developed to integrate family planning and HIV services; support the implementation of family planning and HIV services at the health facility level; improve access to family planning and HIV services, avoid missed opportunities and create good collaboration to provide quality integrated family planning and HIV services (Pike & Morgan 2014:21; Irani et al., 2015:5-9; Knowledge for Health Project 2016b). Effective communication strategies and developing comprehensive messages are vital in integrating family planning and HIV services at the policy, programme and facility level (Irani et al., 2015:5-7). Policies and guidelines on HIV are an enabling environment that helps to ensure maximum effectiveness and sustainability of integrated family planning and HIV services (WHO 2014a:21). Policies and guidelines are essential to integrate family planning and HIV services as key priority areas where HIV prevalence is high to achieve the elimination of mother-to-child transmission (Irani et al., 2015:7). Irani et al. (2015:5-7) recommend policies and guidelines; proper referral systems and on-site or “one-stop shopping” to facilitate the integration of family planning and HIV services at the public health centre level.

Establishing technical working groups to develop and revise national policies or guidelines on family planning and HIV integration is vital to create an enabling environment at the public health facility level (USAID 2016). In Ethiopia, existing policies and guidelines on family planning and HIV services do not provide details on the integration of family planning and HIV services. Consequently, clear operational guidelines, service delivery protocols, and tools are needed to help programme planners and service providers translate the existing policies endorsements into changes in health systems and practices to integrate family planning and HIV services at the public health centre level. It is essential to ensure the implementation of policies and guidelines that can facilitate the integration of family planning and HIV services.

6.5.5 Advocacy/awareness

Advocacy of integrated health care services, such as integrating family planning and HIV services has become a global health strategic priority to improve utilization of health

care services (Center for Health and Gender Equity [CHANGE] & Global Advocacy for HIV Prevention [AVAC] 2015:1-2). Gonzalez & Mutuma (2016:7) refer to advocacy as a strategic and evidence-based process intended to influence policies, practices and behaviours that safeguard and improve the facilitation of integrated family planning and HIV services. Lack awareness is one of the contributing factors that affect the utilization of health care services such as family planning and HIV services (Azmat, Ali, Ishaque et al., 2015:9).

In this study, the participants ranked advocacy/awareness as the fourth priority strategy.

Policy makers, programme managers and service providers should advocate for the utilization of integrated family planning and HIV services and support the provision of accurate information on the benefits of integration of family planning and HIV services at the health facility level, thus build the capacity of clients (Knowledge for Health Project 2016b). It is also important to advocate for good infrastructure if a quality service is to be provided.

6.5.6 Infrastructure

The *Oxford Advanced Learner's Dictionary* (2010:770) defines infrastructure as "the basic systems and services that are necessary for a country of an organization to run smoothly, for example buildings, transport and water and power supplies". Infrastructure includes space, transport, electric power, water supply, sewerage systems, medical equipment, and information and communication technology that help to work effectively in a certain organization (Oyekale 2017:172). In this study, the participants ranked infrastructure as the fifth priority strategy.

In health care facilities, basic infrastructure is required to provide integrated family planning and HIV services. The availability of basic facilities enhances the utilization of integrated health services such as integrated family planning and HIV services (Assaf et al., 2015:14; Kamran et al., 2015:8) emphasise that the availability of transport to the facility and the cost implications of services are contributing factors that can positively or negatively influence the utilization of integrated family planning and HIV services. The infrastructure available might influence the quality of integrated health care services (Agency for Healthcare Research and Quality 2011). For example, enough rooms to

conduct individual assessments can improve the personal experience of the client, ensure privacy and allow for a thorough assessment. A strategic plan to facilitate the implementation of an integrated family planning and HIV services should include actions to ensure good infrastructure (Agency for Healthcare Research and Quality 2011).

6.6 SUMMARY

The results of Phase 1 (quantitative data) and Phase 2 (qualitative data) formed the basis for the development of the strategic plan that could facilitate the implementation of an integrated family planning and HIV services at the public health centre level.

Chapter 7 describes the development process of the strategic plan.

CHAPTER SEVEN

STRATEGIC PLAN DEVELOPMENT AND VALIDATION (OUTCOME)

7.1 INTRODUCTION

This chapter describes the development of the strategic plan to facilitate the implementation of an integrated family planning and HIV services at the public health centre level and the validation of the strategic plan. The development of the strategic plan is discussed first.

7.2 PART I: STRATEGIC PLAN DEVELOPMENT

A strategic plan refers to a recognized set of activities or broad plans of action necessary to achieve an organisation's goals and objectives (Nickols 2016:6). In this study, the strategic plan referred to the development of a plan of action that could facilitate the implementation of an integrated family planning and HIV services at the public health centre level. The researcher used the change logic model to guide the study, and Ortrun's (2002:143-149) process planning model as adapted by Lubbe et al. (2014:6397) model to develop the strategic plan.

The inputs used for the development of strategic plan were the results of the literature review, data collected from the client interviews and the service providers questionnaires. The data collected in Phase 2 – the identified and voted strategies by the nominal group participants (see chapter 6, table 6.17) formed the basis for the development of the strategic plan to facilitate the integration of family planning and HIV services.

After the data analysis and interpretation in phase 1 and phase 2, the researcher utilized the process planning model in developing the strategic plan to facilitate the integration of family planning and HIV services at the public health centre level.

7.2.1 Process planning model

The process planning model was utilized and applied in the study (see figure 7.1). According to Ortrun (2002:143), a model is a representation of a concept or system in a two- or three-dimensional diagram used to establish the patterns and relationships of concepts and formulate a theory. The process planning model describes a cyclical process of planning, taking action, observing, reflecting and, as a result, revising the plan for a new cycle of action research and can be developed on the basis of quantitative as well as qualitative data (Ortrun 2002:143-144).

Although action research was not conducted in this study, the principles were applied as the strategic plan was developed from quantitative as well as qualitative data. The plan will be available for implementation and can be revised or improved by other stakeholders or researchers. In order to facilitate the implementation of integrated family planning and HIV services, the researcher utilized Ortrun's (2002:143-145) revised version of the process planning model and adapted by Lubbe et al. (2014:6397). The model consists of three components (vision, context and practice) and several stages and cycles applied in this study (see figure 7.1).

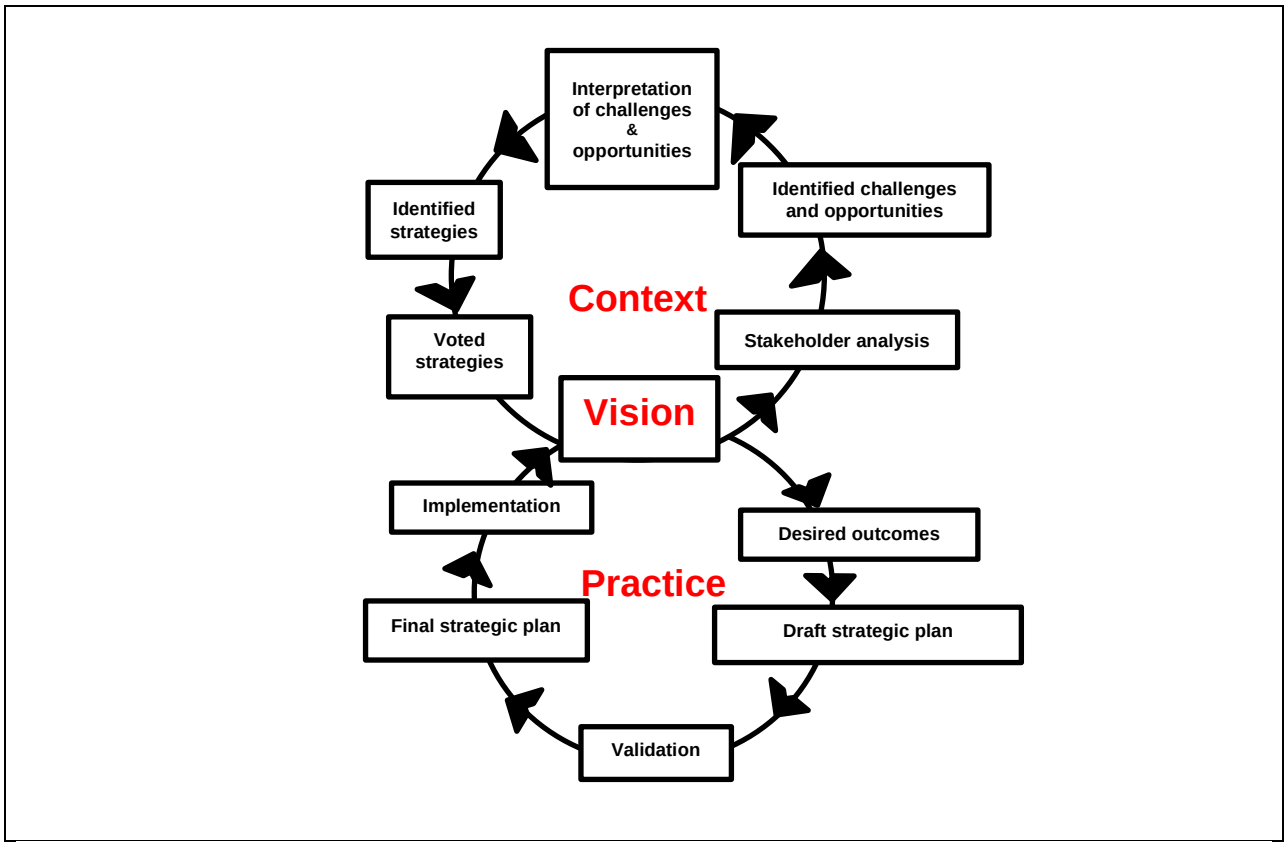

Figure 7.1 The process planning model

Adapted from: Ortrun (2002:145); Lubbe, Roets & Van Tonder (2014:6397)

7.2.2 Theoretical underpinning

The process planning model can be utilized for the development of strategic planning that helps to link the theoretical concept to the practical programme design and implementation that describes the relationship of concepts assumed to occur and what has to be done by whom, how, and when (Ortrun 2002:143). The model can help to design a practical strategic plan and establish a common understanding of the planning process to achieve the goals and objectives (Ortrun 2002:143). For this reason it was suitable for the development of the strategic plan in this study. The process planning model has three components (vision, context and practice) which the researcher applied to design and develop a strategic plan to facilitate the integration of family planning and HIV services at the public health centre level.

Vision: The first component of the process planning model consists of vision-building exercises and questionnaire development (Ortrun 2002:145). In this study, the initial vision was to facilitate the implementation of integrated family planning and HIV services through the application of the change logic model as the backbone for identifying the challenges and opportunities experienced by clients from interview questionnaires and service providers from self-administrated questionnaires (Phase 1). This initial vision was identified through the literature review and unpublished reports in Addis Ababa, Ethiopia. The adapted vision was to identify and vote for strategies to facilitate the implementation of integrated family planning and HIV services by nominal groups that helped guide the development of a strategic plan to facilitate the integrated family planning and HIV services and eventually to improve maternal and child health using the application of the change logic model (Phase 2).

Context: The context includes stakeholder analysis, identification of challenges and opportunities and their interpretation, and identifying and voting for strategies (Ortrun 2002:145). The stakeholders were involved in identifying the challenges and opportunities for the integrated family planning and HIV services in public health centres as well as identifying and voting for strategies. In this study, the stakeholders involved in the identification of challenges and opportunities during phase 1 were clients and service providers. The stakeholders who identified and voted for the strategies based on the data from phase 1 were programme officers who participated in the nominal group.

The respondents (clients and service providers) identified the challenges and opportunities in phase 1 (see chapter 4 and table 7.1) and the nominal group participants identified and voted for the strategies in phase 2. The strategies were the basis for the development of the strategic plan to facilitate the integration of family planning and HIV services (see chapter 6). Consequently, the voted top five strategies were the core basis for the development of the strategic plan (see table 7.1).

Table 7.1 Phase 1 and 2 findings

Summary of challenges and opportunities identified from phase 1: interviews and self-administered questionnaire	**Identified strategies in phase two: Nominal group technique**
Low leadership and management Long waiting time for clients to receive the integrated family planning and HIV service	Leadership AND management
A lack of training for service providers	Capacity building
Lack of awareness on the availability of family planning, HIV and integrated service-related policies, strategies and guidelines	Implementing policies and guidelines
Misconceptions, religious and cultural beliefs and a lack of knowledge of clients	Advocacy and awareness
Inadequate infrastructure	Infrastructure

Practice: Planning for improved practice includes an analysis of the situation and the organizational problem or "thematic concern" which must be shared and "owned" by program officers, followed by a discussion and agreement on the aims, objectives, desired outcomes, strategic plan (what has to be done, by whom, how, when) and evaluation of the strategies and methods to be used (Ortrun 2002:143; Lubbe et al., 2014:6397). In this study, the thematic concern was facilitating the implementation of integrated family planning and HIV services at the public health centre level. The findings of phase 1 were shared with the programme officers and they were involved in identifying and voting for strategies as well as developing the strategic plan in phase 2 (see figure 7.2). Table 7.4 indicates that the desired outcomes were correlated with the categories of each strategy/theme that the researcher and the stakeholders wished to see after implementation of the strategic plan. The draft strategic plan was developed and after rehearsal and adaption, validated by the researcher to produce the final strategic plan (see table 7.11).

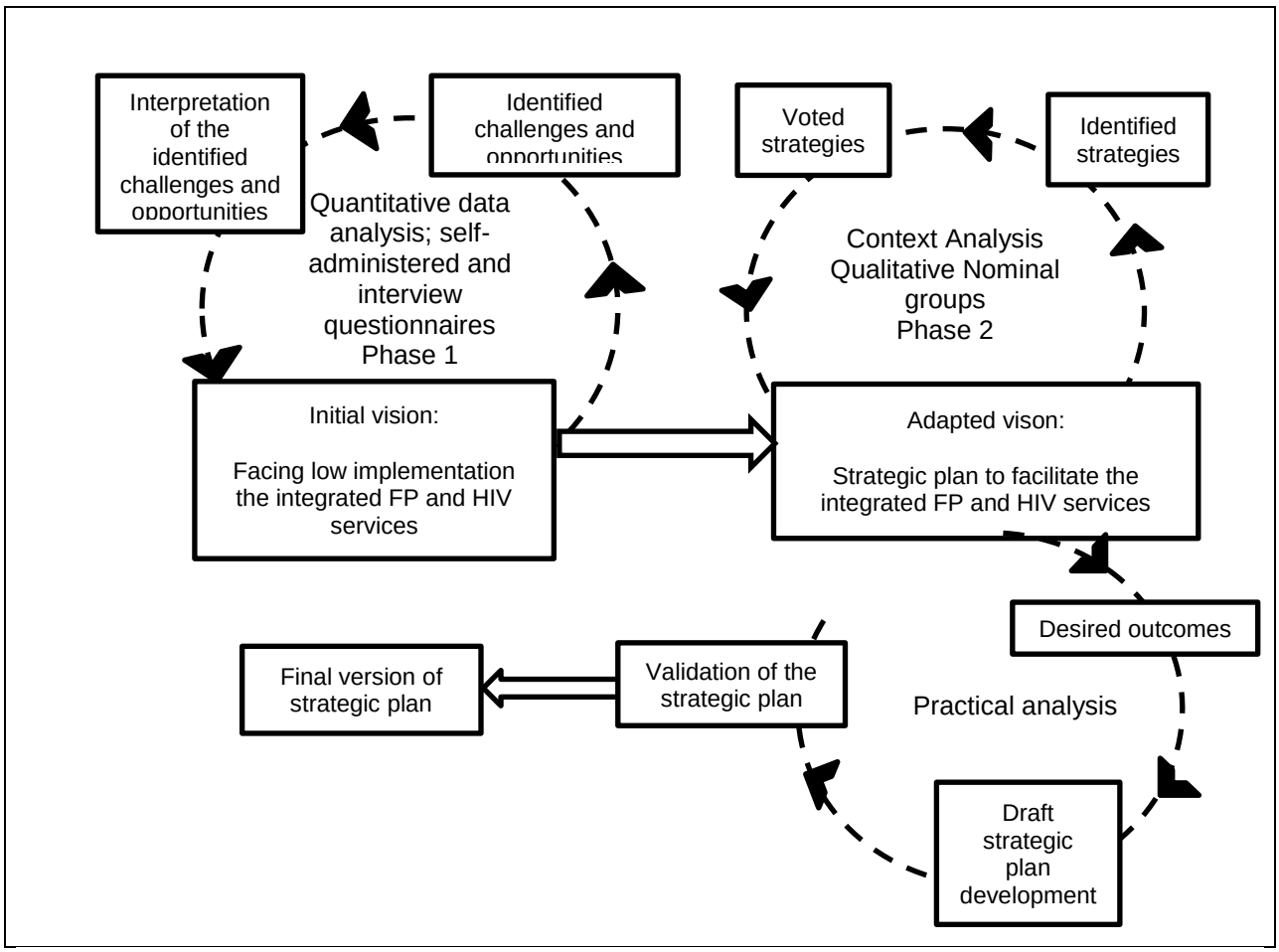

Figure 7.2 Overview of the strategic plan development process

Adapted from: Lubbe et al. (2014:6397)

7.2.3 Strategic plan

The development of the strategic plan focused on the five most important strategies identified by the participants (see sections 7.2.3.1-7.2.3.5). These were leadership and management; capacity building; policy, guidelines and strategies; awareness/advocacy, and infrastructure. A strategic plan refers to a recognized set of activities or broad plans of action necessary to achieve an organisation's goals and objectives (Nickols 2016:6). Strategies are plans of action used to achieve desired outcomes (Nickols 2016:3). Each strategy contained the desired outcomes that the researcher and participants wished to see after implementation of the strategic plan (see table 7.2).

Table 7.2 Identified strategies and desired outcomes

Identified strategies	Desired outcomes
1. Leadership and management	Motivated service providers to provide the integrated family planning and HIV services
	Enabling environment created to facilitate the integrated family planning and HIV services
	Improved integrated FP and HIV services utilization
2. Capacity building	Service providers with improved knowledge and skills regarding the integrated family planning and HIV services
	The integrated family planning and HIV services incorporated in the curriculum of service providers' training
	Empowered clients
3. Implementing policies and guidelines	Policies and guidelines updated/developed and implemented accordingly
	Service providers with improved awareness of the available policies and guidelines
4. Awareness/advocacy	Clients with adequate knowledge and reduced misconceptions, cultural and religious barriers regarding integrated FP and HIV services
	Advocacy of the integrated FP and HIV services
5. Infrastructure	Public health centres with adequate rooms and other medical equipment

The programme offers participated in the development of the strategic plan for each voted strategy (see sections 7.2.3.1-7.2.3.5). The researcher utilized Ortrun's (2002:143) framework as adapted by Lubbe et al. (2014:6397) to develop the strategic plan (see table 7.3). The strategic plan consists of five descriptive columns, addressing the "where" (strategy), "what" (action), "how" (method), "who" (lead responsibility) and "when" (time scale) guiding questions.

7.2.3.1 Leadership and management

Leadership and management were ranked the first priority strategy that needed to be addressed in the strategic plan to facilitate the integration of family planning and HIV services. Leadership and management are the organizational functions that assist to improve delivery of quality health services at health facilities (West et al., 2015:8). The strategic plan had to focus on improving the leadership and management at Ministry,

regional health bureau, sub-city health department and public health centre levels to facilitate the integration of family planning and HIV services at the public health centre level. To meet the desired outcomes in figure 7.2 and table 7.2, the strategic plan had to include actions to address leadership and management.

Table 7.3 Proposed strategic plan for leadership and management

Strategy	Actions	Method	Who is responsible	Time-frame
Leadership and management	Increase the salary scale and benefit packages of service providers (**Motivation**)	Assess the current salary scales and benefit packages in other governmental and non-governmental organizations. Based on the findings, secure the budget and adjust the salary and other benefit packages of service providers.	HR department at the AACAHB and MOH	Once and repeat every five years
	Organize award ceremony for those service providers with outstanding performances to motivate others (**Motivation**)	Nominate awardees with outstanding performance at the public health centre level and provide the award at the end of the fiscal year.	HR department at sub-city offices and AACAHB	Annually
	Organize retreat programmes for service providers to manage the burnout syndrome (**Motivation**)	Arrange a place for service providers to relax and refresh, and invite all service providers working on FP and HIV services to participate in the retreat programme.	HR department at sub-city offices and AACAHB	Annually

Strategy	Actions	Method	Who is responsible	Time-frame
	Organize training in leadership and management for programme officers and family health team (**Motivation**)	Secure budget, prepare agendas and training materials; select appropriate participants from all sub-city offices (20 participants for each session) and decide on the venue.	Programme officers at AACAHB and MOH	Annually
	Assign service providers to offer the integrated FP/HIV services for long-term appointment in family planning or HIV service provision (**Recruitment and deployment**)	Deploy service providers for at least three consecutive years' assignment to provide the integrated FP and HIV service without rotation in every 6 months.	HR department at sub-city offices and AACAHB	Every three years
	Recruit dedicated service providers to offer the integrated FP and HIV services (**Recruitment and deployment**)	Allocate adequate budget for new recruitment position and prepare clear job description. Advertise, interview and appoint an appropriate candidate through competency-based assessment.	HR department at sub-city offices and AACAHB	Annually
	Develop/revise the standard operating procedures (SOP) to create an enabling environment at the public health centre level -Identify/revise the roles of different departments/actors -Coordinate among the different department/actors	All the available policies, guidelines and practices are assessed. Involve the staff, officers, managers and other stake-holders	All representatives of departments/stakeholders who take part in the development of standard operating procedures (SOP) are allocated tasks and responsibilities.	Develop once and revise every three years

Strategy	Actions	Method	Who is responsible	Time-frame
	(Enabling environment)			
	Establish continuous online/face-to-face learning forums to create ownership by all level managers **(Ownership)**	Create online/ face-to-face meetings in every quarter to discuss good practice and challenges in the integrated FP and HIV services	Heads of the public health centres and sub-city health offices	Quarterly
	Improve the waiting time of clients at the public health centre level **(ownership)**	Discuss with service providers to work efficiently for each consultation to be completed <15 minutes and the waiting time for clients will be decreased.	Health centre head and the HR department of sub-city offices	Biannually

The participants (programme officers) identified 12 individual statements and 4 categories regarding leadership and management (see chapter 6, tables 6.10 and 6.11). The nine (9) actions that should be implemented to facilitate the implementation of integrated family planning and HIV services through good leadership and management derived from the literature review (see table 7.3). The nine actions can be summarized in four categories: motivation, recruitment and deployment, enabling environment, and ownership (see table 7.3, and chapter 6, tables 6.10 and 6.11).

Several factors can influence service provider motivation in the workplace. Motivational factors include reducing workload and treating burnout; good salaries and other benefit packages, and creating opportunities for career development (Mosadeghrad 2014:81). In this study, the participants suggested implementing four actions to motivate service providers: increase service providers' salary scale and benefit packages; organize award ceremonies for service providers with outstanding performance to motivate others; organize retreat programmes for service providers to manage burnout syndrome, and organize training in leadership and management for programme officers and family health teams (see table 7.3).

Ye, Diboulo, Kagone et al. (2016:29103) found that organizing performance-based incentives (PBIs) improved the motivation of healthcare providers and the quality of healthcare services. Organizing training for service providers was found to management of burnout (Lahana, Papadopoulou, Roumeliotou et al., 2017:15).

Lubbe et al. (2014:6396) found that recruitment and deployment of new staff helped to reduce the workload of service providers and improve the quality of health care services like family planning and HIV services. The study found that two actions should be implemented to facilitate the integrated family planning and HIV service (see table 7.3). First, service providers should be assigned to offer the integrated family planning/HIV services for long-term appointment (at least for consecutive three years) in family planning or HIV service provision without frequent rotation (see table 7.3). Secondly, dedicated service providers should be recruited to offer the integrated family planning and HIV services every year.

It is essential to create an enabling environment that brings together all stakeholders to undertake the integrated health care services with effective and efficient health systems (WHO 2017c). In this study, the participants proposed one action to create an enabling environment at the public health centre level, namely developing/revising the standard operating procedure (SOP) to identify/revise the roles of different departments/actors and coordinate them. This would include assessing all available policies, guidelines and practices and involving the staff, officers, managers and other stakeholders. All stakeholders should participate in the development of standard operating procedure (SOP) and it should be revised every three years.

Aichatou, Seck, Baal Anne et al. (2016:568) found that it was feasible to create ownership by the public sector to ensure sustainable health care services. In this study, the participants suggested two actions to create ownership that need to be implemented (see table 7.3). First, establish continuous online/face-to-face quarterly learning forums to create ownership by all level managers. Secondly, health centre heads and the human resources departments of the sub-city health offices should improve clients' waiting time.

7.2.3.2 Capacity building

Capacity building through training was ranked as the second strategy to facilitate the integration of family planning and HIV services. Capacity building was a strategy to support the health centres to provide training for service providers pertaining to family planning, HIV and integrated family planning and HIV services.

Table 7.4 Proposed strategic plan for capacity building

Strategy	Actions	Method	Who responsible	Time-frame
Capacity building	Organize and conduct one week ToT (Training of trainers) training on integrated FP and HIV for service providers (**Training of service providers**)	Secure budget, prepare the agendas and training materials select appropriate participants from all sub city offices (20 participants for each session) and decide the venue	Programme officers at AACAHB and MOH	Annually
	Organize and conduct one week rollout training on integrated FP and HIV for service providers (**Training of service providers**)	Secure budget, prepare the agendas and training materials, select appropriate participants from health centres and decide the venue	Programme officers at sub-city health offices and AACAHB	Annually
	Engage women in the planning, implementation and evaluation of FP and HIV programme to empower them to decide on their choices regarding FP and HIV **(women empowerment)**	Nominate representative of women from Women's development army(WDA) and invite them to participate in planning process, implementation and evaluation of programmes as well as different meetings and events	Public health centre staff and programme officers at sub-city health offices and AACAHB	Quarterly
	Provide training for the community	Secure budget, prepare the	Public health centre staff and	Annually

Strategy	Actions	Method	Who responsible	Time-frame
	members such as WDA (Women development army (WDA)/Health development army (HDA) **(women empowerment)**	agendas and training materials, select appropriate participants from health centers and decide the venue	program officers at sub city health offices and AACAHB	
	Provide training on program management to build the capacity of family health team at the sub city and AACAHB level **(Family Health Team)**	Secure budget, prepare the agendas and training materials, select appropriate participants from health centers and decide the venue	MOH	Annually

The participants identified 5 individual statements and 2 categories during the two nominal groups and the researcher suggested 3 actions that should be implemented to facilitate the implementation of integrated family planning and HIV services through the implementation of policies and guidelines (see table 7.5). Table 7.5 indicates that these 3 actions can be summarized in 2 categories: policies and guidelines.

Irani et al. (2015:5-6) found it essential to implement policies and guidelines that influence the accessibility and utilization of health care services such as family planning and HIV services. In this study, the participants proposed 3 actions to implement/revise the existing policies and guidelines, namely provide quarterly technical support to service providers at the public health centres to understand and implement existing policies and other supporting guidelines; develop standard operating procedures (SOP) that guide the implementation of policies and guidelines to facilitate the integration of family planning and HIV services, and revise the existing curriculum to incorporate the integrated family planning and HIV services. Addis Ababa Health Bureau in collaboration with the Ministry of Health and Ministry of Education should implement the proposed strategic plan (see table 7.5).

The provision of training for service providers is one of the capacity building processes that can improve the quality of health care services and integrated family planning and HIV services (WHO 2016e). The participants proposed two actions that need to be implemented to improve the knowledge of service providers. First organize and conduct one week's ToT (training of trainers) training in integrated family planning and HIV for service providers followed by the roll-out training organized by programme officers at AACAHB and MOH every year (see table 7.4). This requires securing budget, preparing agendas and training materials, selecting appropriate participants from all sub-city offices and deciding the venue (see table 7.4).

It is vital to empower and help clients to make informed decisions about where and when to get health care services including the integrated family planning and HIV services (IMA World Health 2017). The participants proposed two actions to empower women that need to be implemented. First, engage women in the planning, implementation and evaluation of family planning and HIV programme on a quarterly basis and then organize training for women from the community. It must be organized by public health centre staff in collaboration with programme officers at sub-city health offices and AACAHB every year (see table 7.4). The sub-city health department in collaboration with Addis Ababa Health Bureau should ensure that adequate funds are available to implement the proposed strategic plan (see table 7.4).

According to the WHO (2017c), managers and leaders need to understand the skills in programme management to improve the functions of assessment, planning, implementation and evaluation The participants proposed one action to improve the skills of the family health team including the programme officers in programme management, namely to provide training in programme management to build the capacity of family health teams every year by MOH (see table 7.4).

7.2.3.3 Implementing policies and guidelines

Implementing policies and guidelines was ranked the third priority strategy to facilitate the integration of family planning and HIV services. Policies and guidelines should be about integrating family planning and HIV services; improving access to family planning and HIV services, avoiding missed opportunities, creates good collaboration to provide the quality of integrated family planning and HIV services (Knowledge for health 2016b).

The proposed strategic plan should focus on how to implement existing policies and guidelines as well as improve service providers' awareness of policies and guidelines on the integration of family planning and HIV services.

Table 7.5 Proposed strategic plan for implementing policies and guidelines

Strategy	Actions	Method	Who responsible	Time-frame
Implementing polices and guidelines	Provide technical support to service providers at the public health centres to understand and implement of existing policies and other supporting guidelines **(Policies)**	Conduct supportive supervision visits and provide on-the-job training by programme officers and FP/HIV department at AACAHB	Programme officers at sub city health offices and AACAHB	Quarterly
	Develop standard operating procedures (SOP) that can guide the implementation of policies and guidelines to facilitate the integration of family planning and HIV services **(Guidelines)**	All the available policies, guidelines and practices are assessed. Involve the staff, programme officers, managers and other stake-holders	AACAHB and MOH	Develop once and revise every three years
	Revise the existing curriculum to incorporate the integrated family planning and HIV services **(Guidelines)**	The entire available curriculum documents of higher institutions for health students are assessed. Involve the Ministry of Education and Ministry of Health and revise the curriculum and include the integrated FP and HIV issues.	MOH and MOE (Ministry of Education)	Revise once and repeat every five years

The participants identified 5 individual statements and 2 categories during the two nominal groups and the researcher suggested 3 actions that should be implemented to

facilitate the implementation of integrated family planning and HIV services through the implementation of policies and guidelines (see table 7.5). Table 7.5 indicates that these 3 actions can be summarized in 2 categories: policies and guidelines.

Irani et al. (2015:5-6) found it essential to implement policies and guidelines that influence the accessibility and utilization of health care services such as family planning and HIV services. In this study, the participants proposed 3 actions to implement/revise the existing policies and guidelines, namely provide quarterly technical support to service providers at the public health centres to understand and implement existing policies and other supporting guidelines; develop standard operating procedures (SOP) that guide the implementation of policies and guidelines to facilitate the integration of family planning and HIV services, and revise the existing curriculum to incorporate the integrated family planning and HIV services. Addis Ababa Health Bureau in collaboration with the Ministry of Health and Ministry of Education should implement the proposed strategic plan (see table 7.5).

7.2.3.4 Awareness/Advocacy

Awareness/advocacy was ranked the fourth strategy to facilitate the integration of family planning and HIV services at the public health centre level. In order to achieve universal health coverage particularly the family planning and HIV services, it is essential to improve awareness/advocacy (IPPF 2017). The proposed strategic plan must focus on improving clients' awareness through continuous promotion, education and counselling using tailored behavioural change communication materials on the integrated family planning and HIV services (see table 7.6).

Table 7.6 Proposed strategic plan for awareness/advocacy

Strategy	Actions	Method	Who responsible	Time-frame
Advocacy/ Awareness	Promote the integrated FP and HIV services using the mass media in different language **(Promotion)**	Develop messages, rent airtime on the available mass media and disseminate the messages	Programme officers at sub-city health offices and AACAHB	Monthly
	Develop and distribute tailored IEC/BCC materials(posters, leaflets, flayers, brochures magazines, etc) related to integrated family planning and HIV service to the community **(communication)**	Develop the content of the IEC/BCC materials, the formatting, language, pictures, and logo. Pretesting of the IEC/BCC materials, final printing and distribution	Programme officers at sub-city health offices and AACAHB	Develop annually Distribute daily
	Provide interpersonal communication training for service providers for effective communication **(communication)**	Secure budget, prepare agendas and training materials. Select appropriate participants from all sub-city offices (20 participants for each session) and decide the venue	Programme officers at AACAHB and MOH	Annually
	Educate clients to increase awareness of the integrated family planning and HIV services **(knowledge)**	Develop education materials; decide the methodology, primary and secondary audiences by different back-grounds, venue (public health centre, public places, market places, church, etc) and educate clients	Program officers at sub-city health offices and AACAHB	Develop annually Educate daily
	Provide quality counselling to improve the clients' knowledge by	Self-assessment done by service providers to check the quality	Service providers, programme officers at sub-city offices and MOH	Daily

Strategy	Actions	Method	Who responsible	Time-frame
	service providers on the integrated family planning and HIV services **(knowledge)**	of counselling according to standard protocols		
	Advocate for and convince leaders on integration of family planning and HIV service **(advocacy)**	Collect evidence and present to leaders	Programme officers at AACAHB and MOH	Annually

The participants identified 8 individual statements and 4 categories during the two nominal groups and the researcher suggested 6 actions that should be implemented to facilitate the implementation of integrated family planning and HIV services through advocacy and awareness (see table 7.6). Table 7.6 shows that the 5 actions can be summarized in 4 categories: promotion, communication, knowledge, and influence leaders.

Health promotion is the process of enabling people to increase control over and improve their health (WHO 2017a). The participants proposed 1 action to promote the integrated FP and HIV services, namely that programme officers at sub-city health offices and AACAHB use the mass media in different languages on a monthly basis. Programme officers are responsible for developing the messages and other methodologies {see table 7.6).

Tailored information on the integrated family planning and HIV services is required and should be disseminated using different communication channels – social media and behavioural change communication materials (USAID 2014:17-22). The participants proposed 2 actions to disseminate accurate information on the integrated family planning and HIV services to clients, namely daily distribution of tailored behavioural change communication materials (posters, leaflets, flyers, brochures, magazines, etc) and provide training in interpersonal communication for service providers. Programme officers at sub-city health offices and AACAHB should be responsible for developing/adapting the behavioural change communication materials and facilitate the training every year (see table 7.6).

Increased community awareness plays a vital role to promoting and increasing utilization of health care services such as family planning and HIV services (Steinfeld et al., 2013:2-5; Babalola et al., 2017:S5-S14). The participants proposed 2 actions to increase the awareness of the community: daily education of clients using educational materials in different languages and providing quality counselling service to clients by service providers (see table 7.6).

There is a need to influence leaders through advocacy to facilitate the integration of family planning and HIV services (Center for Health and Gender Equity [CHANGE] & Global Advocacy for HIV Prevention [AVAC] 2015:1-2). The participants proposed 1 action to influence leaders through advocacy: advocate for and convince leaders on integration of family planning and HIV services supported with evidence by Family planning and HIV programme officers at AACAHB and MOH on an annual base.

7.2.3.5 Infrastructure

Infrastructure was ranked the fifth prioritized strategy to facilitate the integration of family planning and HIV services. Infrastructure might influence the facilitation of integrated health care services (Agency for Healthcare Research and Quality 2011). The proposed strategic plan must focus on the infrastructure of the public health centres to ensure the availability of adequate rooms and medical equipment, including medical supplies (see table 7.7).

Table 7.7 Proposed strategic plan for infrastructure

Strategy	Actions	Method	Who responsible	Time-frame
Infrastructure	Prepare adequate room/space at the public health centres to provide the integrated FP and HIV service **(infrastructure)**	Re-arrange the space/rooms for the provision of family planning and HIV services	Public health centre head and programme officers	Annually
	Build new extra blocks/rooms or renovate the existing infrastructure of public health centres to facilitate the integrated FP and HIV services. **(Infrastructure)**	Secure budget, select the contactor through official administrative procedure, construct the attached wing or new building	Administrative department of the public health centre, sub-city and AACAHB	Once and renovation every year
	Procure all the necessary medical equipment and equip the public health centre	Secure budget, provide quotations and procure through official administrative procedure, equip the public health centres	Administrative department of the public health centre, sub-city and AACAHB	Annually

The participants identified 3 individual statements and 1 category for infrastructure. The participants suggested 3 actions (see table 7.7) that should be implemented to facilitate the implementation of integrated family planning and HIV services through infrastructure. First, prepare adequate room/space at the public health centres to provide the integrated family planning and HIV service through the re-arrangement of space/rooms for the provision of family planning and HIV services by the public health centre head and family planning and HIV programme officers every year. Secondly, build new extra blocks/rooms or renovate the existing infrastructure of the public health centres to facilitate the integrated family planning and HIV services. Thirdly, procure all the necessary medical equipment and equip the public health centres. The administrative department of the public health centre, sub-city and the Addis Ababa Health Bureau should secure funds to build the new infrastructure or renovate the existing infrastructure of the public health centres annually (see table 7.7).

7.2.4 Desired outcomes

The researcher identified ten (10) desired outcomes from the literature review that should be realized after the implementation of the strategic plan by the responsible bodies.

7.2.4.1 Motivated service providers to provide the integrated family planning and HIV services

Motivation of service providers to provide the integrated family planning and HIV services is one of the anticipated results in the strategic plan. Several factors can influence the motivation of service providers in the workplace. Factors that discourage and de-motivate health care service providers include work overload and burnout, a poor working environment, low salaries, poor staffing, and lack of supportive supervision and opportunities for career development (Mosadeghrad 2014:81). Work overload also contributes to staff attrition and its accompanying negative impact on the facilitation of family planning and HIV service integration (USAID 2012a).

Motivated service providers are more likely to facilitate the integration of family planning and HIV services (FHI 2013:7) and experience increased job satisfaction (USAID 2012a). Providers' job satisfaction has a positive effect on facilitating the integration of family planning and HIV services (Mosadeghrad 2014:81). Enhancing managerial leadership in the health sector can facilitate the integration of family planning and HIV services at the public health centre level (Mosadeghrad 2014:81).

7.2.4.2 Enabling environment created to facilitate integrated FP and HIV services

It is essential to create an enabling environment that brings together all stakeholders to undertake the integrated health care services with effective and efficient health systems (WHO 2017c). Creating an enabling environment is a complex task that involves a diverse set of processes to bring about the necessary changes in leadership and management and establish the rules within the organization which assist to operate the integrated health care service delivery (WHO 2017c).

7.2.4.3 Improved utilisation of integrated FP and HIV services

Adamchak et al. (2011:44) found that few clients received the integrated family planning and HIV services for several reasons. Factors that impact on the utilization of integrated family planning and HIV services include health facilities that lack well-equipped infrastructure and human resources to provide the services; lack of knowledge and long waiting times (WHO 2015f; Mulindwa Nsiyi et al., 2015:106).

As most clients preferred to use an integrated family planning and HIV service, it is essential to address the influential factors to facilitate the integration of family planning and HIV services (Harrington et al., 2012:8; W.K. Kellogg Foundation 2004:12).

7.2.4.4 Service providers with improved knowledge and skills regarding the integrated family planning and HIV services

Midwives and nurses are the major service providers to offer family planning and HIV services (WHO 2012b:2; 2015f). Service providers who have adequate knowledge and skills regarding family planning and HIV services help to provide quality services to clients at public health facilities (USAID 2015b:25). Service providers who can offer quality of services must have practical competency-based knowledge, skills and behaviour (WHO 2014g:27).

In Ethiopia, improving the knowledge, skills and behaviours of service providers can be achieved through competency-based education programmes and on-going professional development to incorporate new developmental skills such as in-service and pre-service training (MOH Ethiopia 2012). Programme officers should disseminate evidence-based practices through continuous mentorship programmes to facilitate the integration of family planning and HIV services at public health centres in Addis Ababa and support service providers to offer quality integrated family planning and HIV services (Moule et al., 2014:10). The 10 sub-city health offices will ensure the dissemination of evidence-based practice to all public health centres in Addis Ababa. This will help to achieve the SDGs towards to universal access to integrated family planning and HIV services (UNFPA 2016:6).

7.2.4.5 Family planning and HIV incorporated in the curriculum of service providers' training

A curriculum refers to a systematic and intended packaging of competencies – knowledge, skills and attitudes - that students/learners should acquire through organized learning experiences (UNESCO 2017). Countries should revise their existing curriculum and incorporate the new area of challenges such as HIV and family planning (UNESCO 2017). Williams & Gillespie (2015:21) found that curriculum-based programme interventions in schools are effective in creating a significant improvement of competencies.

It is essential to incorporate family planning and HIV in the existing curriculum at higher institutional level that ensures the integrated services (UNESCO 2017). Atuahene et al. (2016:5) found that curriculum-based training assisted providers' competency to design innovative action plans and meet client satisfaction needs.

7.2.4.6 Empowered clients

It is vital to empower and help clients to make informed decisions about where and when to get health care services including integrated family planning and HIV services (IMA World Health 2017). Investing in women' access to and improving their knowledge and empowering them for the utilization of family planning and HIV services reduces maternal and child deaths (IMA World Health 2017). Empowered women contribute to the health and productivity of whole families and communities, and improve prospects for the next generation (UNFPA 2017a). Atuahene et al. (2016:1) maintain that service providers should ensure the quality and comprehensiveness of health care services through active participation of clients such as client satisfaction assessment.

7.2.4.7 Policies and guidelines revised/developed and implemented

Policies and guidelines are helpful to achieve the SDGs and ensure universal access to health services including family planning and HIV services (WHO 2016h). It is essential to develop or revise policies and guidelines that can influence the accessibility and utilization of health care services such as family planning and HIV services (Irani et al.,

2015:5-6). Policy briefs and guidelines assist countries to develop their own national guidelines to facilitate the provision of heath care services (WHO 2014a).

Although the Ethiopian Ministry of Health has developed policies and guidelines on family planning and HIV, these do not elaborate on the integration of family planning and HIV services. Consequently, there are limited policies and guidelines to support the integration of family planning and HIV services in Ethiopia. As health issues are dynamic and not static over time, some polices and guidelines need to be revised or updated to incorporate the new evidence related to family planning and HIV services (MOH Ethiopia 2012). It is also essential to make copies of the most recent policies and guidelines available at the public health centre level to help service providers to implement the integration of family planning and HIV services.

7.2.4.8 Service providers with improved awareness of available policies, strategies and guidelines

Service providers should be aware of the available policies and guidelines pertaining to the integration of family planning and HIV services especially at the public health centres where the majority of service providers in Ethiopia work (Adamchak et al., 2011:41). It is essential to explore the available evidence on the effect of FP/HIV service integration on service providers' performance (USAID 2012a). The availability of policies and guidelines is vital to facilitate integrated family planning and HIV services (Kana et al., 2015:334). The availability of policies and guidelines alone is not enough to facilitate the integration of family planning and HIV services, however; service providers should be aware of the family planning and HIV related policies and guidelines (Adamchak et al., 2011:41).

7.2.4.9 Lack of knowledge, misconceptions, and cultural and religious barriers regarding integrated FP and HIV services

A lack of knowledge, misconceptions, and cultural and religious issues are among the factors that affect the utilization of integrated family planning services (Eliason et al., 2014:65). These challenges should be addressed through social media and other communication channels as well as interpersonal communication to improve clients' awareness of the integrated family planning and HIV services (USAID 2014:17-22).

7.2.4.10 Public health centres with adequate space and medical resources

Public health centres with adequate space and medical equipment are one of the anticipated results in this framework. Medical resources include equipment, ART drugs, contraceptives, HIV test kits that help to deliver family planning and HIV services at facility level. Various medical equipment and supplies are essential to provide family planning as well as HIV services (Assaf et al., 2015:17). The availability of sufficient equipment and supplies can enhance the facilitation of integrated family planning and HIV service delivery (Assaf et al., 2015:17).

In Ethiopia, having or making all the necessary family planning and HIV commodities and essential supplies available is vital to address programmatic challenges to facilitate the integration of family planning and HIV services (UNFPA 2016).

An, George, LeFevre et al. (2015:451) found that a lack of adequate space was one of the potential constraints that affected the integrated health care services. Infrastructural deficiencies should be addressed at facility level to ensure the provision of health care services (Scholz, Ngoli & Flessa 2015:183). Lafort, Jocitala, Candrinho et al. (2016:301) emphasise the importance of expanding health care facilities' space to improve access to integrated health care services.

7.2.5 Draft strategic plan

The researcher developed the draft strategic plan and validated it with the nominal group participants (see section 7.3). Their suggestions and comments were incorporated according to the institution's needs, budget, and the human resources available to finalize the draft strategic plan.

Table 7.8 Draft strategic plan

Strategy	Actions	Method	Who responsible	Time-frame
Leadership and management	Increase the salary scale and benefit packages of service providers (**motivation**)	Assess the current salary scales and benefit packages in other governmental and non-governmental organizations and based on the findings secure the budget and adjust the salary and other benefit packages of service providers	HR department at the AACAHB and MOH	Once and repeat every five years
	Organize award ceremonies for those service providers with outstanding performances to motivate others (**motivation**)	Nominate awardees with outstanding performances at the public health centre level and provide the award at the end of the fiscal year	HR department at sub-city offices and AACAHB	Annually
	Organize retreat programmes for service providers to manage the burnout syndrome (**motivation**)	Arrange the place where service providers can refresh and invite all service providers working on FP and HIV services to participate in the retreat programmes	HR department at sub-city offices and AACAHB	Annually
	Organize training in leadership and management for programme officers and family health team (**motivation**)	Secure budget, prepare agendas and training materials; select appropriate participants from all sub-city offices (20 participants for each session) and decide on the venue	Programme officers at AACAHB and MOH	Annually
	Assign service providers to offer the integrated FP/HIV services for long-term appointment in family planning or HIV service provision (**recruitment and deployment**)	Deploy service providers for at least three consecutive years' assignment to provide the integrated FP and HIV service without rotation every 6 months	HR department at sub-city offices and AACAHB	Every three years
	Recruit dedicated service providers to offer the integrated FP and HIV services (**recruitment and**	Allocate adequate budget for new recruitment position and prepare clear job description.	HR department at sub-city offices and AACAHB	Annually

Strategy	Actions	Method	Who responsible	Time-frame
	deployment)	Advertise, interview and appoint an appropriate candidate through competency-based assessment		
	Develop/revise the standard operating procedures (SOP) to create an enabling environment at the public health centre level -Identify/revise the roles of different departments/actors -Coordinate the different departments/actors **(enabling environment)**	All the available policies, guidelines and practices are assessed. Involve the staff, programme officers, managers and other stake holders	All representatives of departments/stakeholders who take part in the development of standard operating procedures (SOP) are allocated tasks and responsibilities	Develop once and revise every three years
	Establish continuous online/face-to-face learning forums to create ownership by all level managers **(Ownership)**	Create online/face-to-face meetings every quarter to discuss good practice and challenges in the integrated FP and HIV services	Head of the public health centres and sub-city health offices	Quarterly
	Improve the waiting time of clients at the public health centre level **(ownership)**	Discuss with service providers to work efficiently for each consultation to be completed <15 minutes and the waiting time for clients will be decreased	Health centre head and the HR department of sub city offices	Biannually
Capacity building	Organize and conduct one week ToT (Training of trainers) training on integrated FP and HIV for service providers (**training of service providers**)	Secure budget, prepare agendas and training materials; select appropriate participants from all sub-city offices (20 participants for each session) and decide on the venue	Programme officers at AACAHB and MOH	Annually
	Organize and conduct one week roll-out training in integrated FP and HIV for service providers (**training of service providers**)	Secure budget, prepare the agendas & training materials, select appropriate participants from health centres and decide the venue	Programme officers at sub-city health offices and AACAHB	Annually
	Engage women in the planning,	Nominate representative of women from	Public health centre staff and programme officers	Quarterly

Strategy	Actions	Method	Who responsible	Time-frame
	implementation and evaluation of FP and HIV program to empower them to decide on their choices regarding FP and HIV **(women empowerment)**	Women's development army(WDA) and invite them to participate in planning process, implementation and evaluation of programmes as well as different meetings and events	at sub-city health offices and AACAHB	
	Provide training for the community members such as WDA (Women's development army (WDA)/ Health development army (HDA) **(women empowerment)**	Secure budget, prepare agendas and training materials, select appropriate participants from health centres and decide on the venue	Public health centre staff and programme officers at sub-city health offices and AACAHB	Annually
	Provide training in program management to build the capacity of family health team at the sub-city and AACAHB level **(family health team)**	Secure budget, prepare the agendas and training materials, select appropriate participants from health centres and decide on the venue	MOH	Annually
Implementing polices and guidelines	Provide technical support to service providers at the public health centres to understand and implement existing policies and other supporting guidelines **(policies)**	Conduct supportive supervision visits and provide on-the-job training by programme officers and FP/HIV department at AACAHB	Programme officers at sub-city health offices and AACAHB	Quarterly
	Develop standard operating procedures (SOP) that can guide the implementation of policies and guidelines to facilitate the integration of family planning and HIV services **(guidelines)**	All the available policies, guidelines and practices are assessed. Involve the staff, programme officers, managers and other stakeholders	AACAHB and MOH	Develop once and revise every three years
	Revise the existing curriculum to	The entire available curriculum documents of	MOH and MOE (Ministry of Education)	Revise once and

Strategy	Actions	Method	Who responsible	Time-frame
	incorporate the integrated family planning and HIV services **(Guidelines)**	the higher institutions for health students are assessed. Involve the Ministry of Education and Ministry of health and revise the curriculum and include the integrated FP and HIV issues.		repeat every five years
Advocacy/ Awareness	Promote the integrated FP and HIV services using the mass media in different languages **(promotion)**	Develop messages, rent airtime on available mass media and disseminate the messages	Programme officers at sub-city health offices and AACAHB	Monthly
	Develop and distribute tailored IEC/BCC materials (posters, leaflets, flayers, brochures, magazines, etc) related to integrated family planning and HIV service to the community **(communication)**	Develop the content of the IEC/BCC materials, formatting, language, pictures, and logo. Pretesting of the IEC/BCC materials, final printing and distribution	Programme officers at sub-city health offices and AACAHB	Develop annually Distribute daily
	Provide interpersonal communication training for service providers for effective communication **(communication)**	Secure budget, prepare agendas and training materials; select appropriate participants from all sub-city offices (20 participants for each session) and decide on the venue	Programme officers at AACAHB and MOH	Annually
	Educate clients to increase awareness regarding the integrated family planning and HIV services **(knowledge)**	Develop the education materials; decide the methodology, primary and secondary audiences by different backgrounds, venue (public health centre, public places, market places, church, etc..) and educate clients	Programme officers at sub-city health offices and AACAHB	Develop annually Educate daily
	Provide quality counselling to improve the knowledge of clients by service providers on the integrated family planning and HIV services	Self-assessment done by service providers to check the quality of counselling according to the standard protocols	Service providers, programme officers at sub-city offices and MOH	Daily

Strategy	Actions	Method	Who responsible	Time-frame
	(knowledge)			
	Advocate for and convince leaders on integration of family planning and HIV service **(advocacy)**	Collect evidence and present to leaders	Programme officers at AACAHB and MOH	Annually
Infrastructure	Prepare adequate room/space at the public health centres to provide the integrated FP and HIV service **(infrastructure)**	Re-arrange the space/rooms for the provision of family planning and HIV services	Public health centre head and programme officers	Annually
	Build the new extra blocks/rooms or renovate the existing infrastructure of the public health centres to facilitate the integrated FP and HIV services. **(infrastructure)**	Secure budget, select the contactor through official administrative procedure, construct the attached wing or new building	Administrative department of the public health centre, sub city and AACAHB	Once and renovation every year
	Procure all the necessary medical equipment and equip the public health centre **(infrastructure)**	Secure budget, provide quotation and procure through official administrative procedure, equip the public health centres	Administrative department of the public health centre, sub city and AACAHB	Annually

The draft strategic plan (see table 7.8) was then validated as discussed next.

7.3 PART II: VALIDATION OF DRAFT STRATEGIC PLAN

The purpose of the validation process was to finalize the draft strategic plan developed by the researcher. The purpose of validation was to provide an opportunity for the participants to provide their comments and inputs on the draft strategic plan and agree or disagree on the content of the final and approved strategic plan to ensure the correctness of the contents for the final strategic plan.

7.3.1 Venue

The validation meeting was conducted at the conference room at Soramba Hotel in Addis Ababa on 28 June 2017 as arranged between the participants, the facilitator and the researcher.

7.3.2 Participants

The NGT participants were invited to participate in the validation of the strategic plan. Three participants were not available for the validation meeting and the Addis Ababa City Administration Health Bureau sent replacement programme officers as participants. The validation meeting took place on the arranged date.

7.3.3 Validation process

The researcher welcomed the participants and the facilitator. The facilitator described the purpose of the validation meeting. Each participant received a copy of the strategies identified during the nominal group (see chapter 6, table 6.17) as well as a copy of the draft strategic plan (see table 7.8) together with the validation guide (see table 7.9) in writing. The facilitator explained that the validation meeting would entail two sessions.

Session I

In the first session the researcher presented the draft strategic plan. The researcher did a 15-minute power point presentation on the draft strategic plan.

Session II

During the second session the participants were allowed 30 minutes to review and comment on the draft strategic plan. The facilitator ensured that all participants understood the draft strategic plan and how to complete the validation guide (see table 7.9). The participants had to agree or disagree with every action, add their individual suggestions and provide their comments in the spaces provided on the copy of the draft strategic plan.

Table 7.9 Validation guide

Strategy	Actions	Method	Who responsible	Time-frame	Agree	Disagree	Suggested change	Comments

After that the facilitator divided the participants into five groups (four groups consisted of 5 participants and one group consisted of 4 participants who worked with the 5th strategy). Each group was allocated to attend to one of the five voted strategies. For example, one group worked on the first strategy writing in the draft strategic plan and the other groups worked on the second, third, fourth and fifth strategies. They added and combined all their suggestions using the validation guide attached to the draft strategic plan (see tables 7.8 and 7.9). A volunteer from each group presented the group's suggestions for changes to the entire group during a plenary session. The facilitator facilitated the validation meeting and allowed the participants to suggest or comment on each aspect of the draft strategic plan.

The researcher captured the suggestions from the five groups on the flip chart which was visible to all participants. The researcher acted as a scribe and also captured all the suggestions on a computer, displaying the screen on the white wall so that participants could verify that their suggestions had been accurately captured. The participants' suggestions were then added to the respective components of the draft strategic plan. For example, the draft strategic plan indicated increasing only the salary of service providers but the participants suggested increasing the salary of all the staff of public health centres, sub-city and Addis Ababa City Administration Health Bureau (see table 7.10). The draft strategic plan was amended in their plenary session. The participants were allowed to discuss the suggestions and comment on all the aspects until consensus was reached on the final strategic plan. The participants' suggestions therefore added the expert advice needed to complete the strategic plan. After consensus was reached, the draft strategic plan was finalized with the participants' suggestions included. Table 7.10 indicates the participants' suggestions added in blue in the various components of the draft strategic plan. Table 7.30 indicates that some participants disagreed with some of the actions during the small group discussion, but all actions were taken with some amendments after all the participants reached consensus in the small group discussion and were presented for final approval during

the plenary session. Thus, the additions added to the draft strategic plan were based on agreement by the entire group after validation.

7.3.4 Result and discussion of the validation meeting

The draft strategic plan was reviewed by all the participants prior to the group discussion during the validation meeting. The participants were asked to agree or disagree with/on the action points, and include their suggested changes and comments on their personal copy and share these with the group. Each group of participants discussed, combined and added their agreed suggested changes and comments on the validation guide (see table 7.10). Each group presented the suggested changes and comments to all the participants and consensus was reached among them. The researcher collated the notes and calculated the responses and finalized the strategic plan.

7.3.4.1 Leadership and management

All the participants agreed with all 9 actions in the draft strategic plan (see table 7.8). Tsofa, Molyneux & Goodman (2016:260-276) emphasise that alignment of the budget with planning is very important for the feasibility of implementing actions. During the validation meeting, the participants raised the concern of feasibility of implementing the actions as some of the actions require huge amounts of budget for implementation. Although increasing the salary scale and benefit packages, and organizing retreat programmes for service providers require a huge amount, the participants suggested considering including all staff of the public health centre, sub-city and AACAHB for the retreat programme to avoid discrimination amongst the staff of the public health centre.

The engagement of health facilities at lower level is an effective approach to improving facility readiness and planning for the implementation of actions with limited resources such as motivation, training and recruitment (Iyer, Kamanzi, Mugunga et al., 2015:28365). The participants suggested involving the public health centre staff in organizing the award ceremony for service providers with outstanding performance, including medical directors and process owners from public health centres in leadership and management training, involving public health centres in the recruitment of service providers and following the government procedures of recruitment.

Rotation of service providers is a good strategy for efficient human resources utilization in the health facilities that could promote the benefits for service providers to improve their job satisfaction and the health facilities to improve service delivery periodically and fairly (Ho, Chang, Shih & Liang 2009:8). The participants were further concerned about the duration of the rotation of service providers in family planning and/or HIV service provision and suggested changing rotation from three years to two years. In addition, they suggested providing refresher training before rotation done.

It is important to identify challenges/lessons learned and solution pathways, and lead to coordinated action and ownership by stakeholders through continuous discussion (Ashraf, Moore, Gupta et al., 2015:74). The participants suggested including the AACAHB in the learning forum (online or face-to-face) biannually together with public health centre and sub-city health office staff to create ownership by all level managers. The AACAHB was included in the draft strategic plan (see table 7.10).

Increased waiting time is one of the factors that can influence the integrated family planning and HIV services (Mutemwa, Mayhew, Colombini et al., 2013:18). In order to improve the waiting time of clients at the public health centre level, the participants suggested involving sub-city heads, programme officers, family health team and AACAHB in the discussion and suggested changing the discussion into the review meeting.

7.3.4.2 Capacity building

All the participants agreed with implementing the 5 actions in the draft strategic plan (see table 7.8) and suggested adding one more action, therefore 6 actions to be implemented (see table 7.10). The added action was to organize mentorship programmes to build the capacity of service providers as mentorship is a system of practical training and consultation that helps to improve service providers' professional development to implement quality integrated health care services (WHO 2017c).

The involvement of stakeholders is crucial for the implementation of actions (Ashraf et al., 2015:74). The participants suggested including partners/stakeholders in the capacity

building actions and the AACAHB should also take part with the MOH to organize the training on programme management planned to provide training for family health team.

The availability of adequate resources/budget is essential to conduct training for service providers (Mosadeghrad 2014:81). The participants were concerned about the availability of resources to implement the strategic plan for capacity building. They suggested ensuring the availability of funding and changing the timeframe from annual to bi-annual roll-out training for service providers and community members such as the women's development army (WDA) and the health development army (HDA) as well as including the urban health extension workers to reach as many as possible trainees.

7.3.4.3 Implementing policies and guidelines

All the participants agreed with implementing the 3 actions in the draft strategic plan (see table 7.8). A standard operating procedure (SOP) is a step-by-step guide that gives direction to outline each step for the implementation of policies and guidelines (WHO 2013:1). During the validation meeting, the participants suggesting changing the time-frame of revising/updating the standard operating procedures (SOP) to every five years rather than every three years and agreed the amendment in the draft strategic plan (see table 7.10).

7.3.4.4 Awareness/advocacy

All the participants agreed to implementing all 6 actions in the draft strategic plan (see table 7.8). The mass media is the most common communication channel to change individuals' behaviour – in this case, for the utilization of integrated health care services (USAID 2014:17-22) and the content of the messages should be clear and simple (Ajaero, Odimegwu, Ajaero & Nwachukwu 2016:427). The participants suggested that the AACAHB should coordinate the overall process of message development on family planning and HIV to deliver uniform and adequate information to clients using different languages.

Deressa et al. (2015:3) state that service providers' interpersonal communication skills are essential to provide adequate information regarding family planning and HIV to

improve service utilization. The participants suggested including service providers as the body responsible for training in interpersonal communication.

The World Health Organization (2017d) recommends advocating the integrated family planning to enhance the visibility, availability, and quality of family planning/HIV services for clients. The participants stated that the level of leadership for advocacy should be specified and suggested advocating for the integrated family planning and HIV services with higher officials and political leaders for their involvement.

7.3.4.5 Infrastructure

The participants agreed with all 3 actions in the draft strategic plan (see table 7.8) and added one more action, namely to repair the existing medical equipment as part of the infrastructure (see table 7.10).

Irani et al. (2015:8) found that some facilities have sub-standard infrastructure and are not able to re-arrange sufficient physical rooms to offer the integrated family planning and HIV services. The participants commented that the existing structure of public health facilities might not be conducive to re-arrangement for adequate rooms. They suggested changing the time-frame for building/renovating the existing buildings from every year to every three years for practical reasons as this had budget implications. The participants suggested further that the role and contribution of each unit in contributing to building/renovating the infrastructure should be specified.

Table 7.10 Amendments to the draft strategic plan

Strategy	Actions	Method	Who responsible	Time-frame	Agree	Disagree	Suggested change	Comments
Leadership and management	Increase the salary scale and benefit packages of service providers (**motivation**)	Assess the current salary scales and benefit packages in other governmental and non-governmental organizations and, based on the findings, secure the budget and adjust the salary and other benefit packages of service providers	HR department at the AACAHB and MOH	Once and repeat every five years	**4**	1	Increase the salary scale and benefit packages for all staff of public health centres, sub-city and AACAHB	It requires huge budget
	Organize award ceremonies for those service providers with outstanding performance to motivate others (**motivation**)	Nominate awardees with outstanding performance at the public health centre level and provide the award at the end of the fiscal year	HR department at sub-city offices and AACAHB	Annually	**5**	0	Public health centre staff are also responsible	
	Organize retreat programmes for service providers to manage the burnout syndrome (**motivation**)	Arrange the place where service providers can refresh and invite all service providers working in FP and HIV services to participate in the	HR department at sub-city offices and AACAHB	Annually	3	2	Organize retreat programmes for all staff of public health centre, sub- city and AACAHB	Ensure the feasibility as it requires huge budget

Strategy	Actions	Method	Who responsible	Time-frame	Agree	Disagree	Suggested change	Comments
		retreat programme						
	Organize training in leadership and management for programme officers and family health team (**motivation**)	Secure budget, prepare agendas and training materials, select appropriate participants from all sub-city offices (20 participants for each session) and decide on the venue	Programme officers at AACAHB and MOH	Annually	5	0	Include medical directors and process owners from public health centres in the training	
	Assign service providers to offer the integrated FP/HIV services for long-term appointment in family planning or HIV service provision (**recruitment and deployment**)	Deploy service providers for at least three consecutive years' assignment to provide the integrated FP and HIV services without rotation in every 6 months	HR department at sub-city offices and AACAHB	Every three years	4	1	Change the time-frame from three to two years	Requires refresher training before rotation done
	Recruit dedicated service providers to offer the integrated FP and HIV services (**recruitment and deployment**)	Allocate adequate budget for new recruitment position and prepare clear job description. Advertise, interview and appoint an appropriate candidate through competency-based assessment	HR department at sub-city offices and AACAHB	Annually	5	0	Include public health centres in the recruitment process	Follow the government recruitment procedure

Strategy	Actions	Method	Who responsible	Time-frame	Agree	Disagree	Suggested change	Comments
	Develop/revise the standard operating procedures (SOP) to create an enabling environment at the public health centre level -Identify/revise the roles of different departments/actors -Coordinate among the different departments/actors **(enabling environment)**	All the available policies, guidelines and practices are assessed. Involve the staffs, programme officers, managers and other stake holders	All representatives of departments/stakeholders who take part in the development of standard operating procedures (SOP) are allocated tasks and responsibilities	Develop once and revise every three years	5	0		
	Establish continuous online/face-to-face learning forums to create ownership by all level managers **(ownership)**	Create online/ face-to-face meetings in every quarter to discuss good practice and challenges in the integrated FP and HIV services	Head of the public health centres and sub-city health offices	Quarterly	5	0	Involve the AACAHB in the learning forum biannually	
	Improve the waiting time of clients at the public health centre level **(ownership)**	Discuss with service providers that to work efficiently, each consultation should be completed in <15 minutes and the waiting time for clients will be decreased	Health centre heads and the HR department of sub-city offices	Biannually	5	0	Involve sub-city heads, programme officers, family health team and AACAHB	Review meeting might be more helpful
Capacity building	Organize and conduct one week ToT (Training of trainers)	Secure budget, prepare the agendas and	Programme officers at AACAHB and MOH	Annually	5	0		

Strategy	Actions	Method	Who responsible	Time-frame	Agree	Disagree	Suggested change	Comments
	training in integrated FP and HIV for service providers (**training of service providers**)	training materials, select appropriate participants from all sub-city offices (20 participants for each session) and decide on the venue						
	Organize and conduct one week rollout training on integrated FP and HIV for service providers (**training of service providers**)	Secure budget, prepare agendas and training materials, select appropriate participants from health centres and decide on the venue	Programme officers at sub-city health offices and AACAHB	Annually	5	0	Change the time-frame from annually to bi-annually	Consider mentorship programmes
	Engage women in the planning, implementation and evaluation of FP and HIV program to empower them to decide on their choices regarding FP and HIV **(women empowerment)**	Nominate representative of women from Women development army(WDA) and invite them to participate in planning process, implementation and evaluation of programs as well as different meeting and events	Public health centre staff and programme officers at sub-city health offices and AACAHB	Quarterly	5	0	Include partners to take part in capacity building action	Requires huge budget
	Provide training for community members such as Women's development army	Secure budget, prepare agendas and training materials, select	Public health centre staff and programme officers at sub-city health offices and AACAHB	Annually	4	1	Change the time-frame from annually to bi-annually and	

Strategy	Actions	Method	Who responsible	Time-frame	Agree	Disagree	Suggested change	Comments
	(WDA)/Health development army (HDA) **(women empowerment)**	appropriate participants from health centres and decide on the venue					include urban health extension workers	
	Provide training in programme management to build the capacity of family health teams at the sub- city and AACAHB level **(family health team)**	Secure budget, prepare agendas and training materials; select appropriate participants from health centres and decide on the venue	MOH	Annually	5	0	AACAHB is also responsible	
Implementing polices and guidelines	Provide technical support to service providers at the public health centres to understand and implement existing policies and other supporting guidelines **(Policies)**	Conduct supportive supervision visits and provide on-the-job training by programme officers and FP/HIV department at AACAHB	Programme officers at sub-city health offices and AACAHB	Quarterly	**5**	0		
	Develop standard operating procedures (SOP) that can guide the implementation of policies and guidelines to facilitate the integration of family planning and HIV services **(guidelines)**	All the available policies, guidelines and practices are assessed. Involve the staff, programme officers, managers and other stake-holders	AACAHB and MOH	Develop once and revise every three years	**5**	0	Revise every five years	
	Revise the existing curriculum to incorporate the integrated family	The entire available curriculum documents of the	MOH and MOE (Ministry of Education)	Revise once and repeat every five years	**4**	1		

Strategy	Actions	Method	Who responsible	Time-frame	Agree	Disagree	Suggested change	Comments
	planning and HIV services **(guidelines)**	higher institutions for health students are assessed. Involve the Ministry of Education and Ministry of Health and revise the curriculum and include the integrated FP and HIV issues.						
Advocacy/ Awareness	Promote the integrated FP and HIV services using the mass media in different languages **(promotion)**	Develop messages, rent air-time on the available mass media and disseminate the message	Programme officers at sub-city health offices and AACAHB	Monthly	5	0	AACAHB should be responsible for developing uniform messages	Make sure the messages are clear and avoid stigma words
	Develop and distribute tailored IEC/BCC materials(posters, leaflets, flayers, broachers magazine, etc) related to integrated family planning and HIV service to the community **(communication)**	Develop the content of the IEC/BCC materials, formatting, language, pictures, and logo. Pretesting of the IEC/BCC materials, final printing and distribution	Programme officers at sub-city health offices and AACAHB	Develop annually Distribute daily	5	0		
	Provide interpersonal communication training for service providers for effective communication **(communication)**	Secure budget, prepare agendas and training materials; select appropriate participants from	Programme officers at AACAHB and MOH	Annually	4	1	Include service providers as responsible body	

Strategy	Actions	Method	Who responsible	Time-frame	Agree	Disagree	Suggested change	Comments
		all sub-city offices (20 participants for each session) and decide on the venue						
	Educate clients to increase awareness regarding the integrated family planning and HIV services **(Knowledge)**	Develop the education materials; decide on methodology, primary and secondary audiences by different back-grounds, venue (public health centre, public places, market places, church, etc) and educate clients	Programme officers at sub-city health offices and AACAHB	Develop annually Educate daily	5	0		
	Provide quality counselling to improve clients' knowledge by service providers on the integrated family planning and HIV services **(Knowledge)**	Self-assessment done by service providers to check the quality of counselling according to the standard protocols	Service providers, programme officers at sub-city offices and MOH	Daily	5	0		
	Advocate for and convince leaders on integration of family planning and HIV services **(advocacy)**	Collect evidence and present to leaders	Programme officers at AACAHB and MOH	Annually	5	0	Advocate for and convince higher officials and political leaders	Specify the level of leadership
Infrastructure	Prepare adequate room/ space at the	Re-arrange the space/rooms for	Public health centre head and programme officers	Annually	4	0		The existing structure might

Strategy	Actions	Method	Who responsible	Time-frame	Agree	Disagree	Suggested change	Comments
	public health centres to provide the integrated FP and HIV services **(infrastructure)**	the provision of family planning and HIV services						not be conducive for re-arrangement
	Build new extra blocks/rooms or renovate the existing infrastructure of the public health centres to facilitate the integrated FP and HIV services. **(Infrastructure)**	Secure budget, select the contactor through official administrative procedure, construct the attached wing or new building	Administrative department of the public health centre, sub city and AACAHB	Once and renovation every year	3	1	Change the time-frame from every year to every three years	Specify the role of each unit
	Procure all the necessary medical equipment and equip the public health centre	Secure budget, provide quotation and procure through official administrative procedure, equip the public health centres	Administrative department of the public health centre, sub city and AACAHB	Annually	4	0		Consider repairing medical equipment

7.3.5 Trustworthiness in the development of the strategic plan

The researcher observed the criteria of trustworthiness by applying credibility; transferability, dependability, confirmability and triangulation (see chapter 5, section 5.6).

- **Credibility**

The nominal group discussion participants identified and voted for the strategies (see table 6.17). The participants analysed the results, validated the strategic plan, discussed and reached consensus during the validation meeting. This ensured the credibility of the strategic plan.

- **Transferability**

The validated strategic plan could be transferred to similar contexts and implemented in other settings, because the researcher discussed the context of the study and provided a complete and clear data trail. This would allow other researchers to transfer the data for the strategic plan development process in similar contexts.

- **Dependability**

The measures taken to enhance credibility determined the dependability of the data during the strategic plan development.

- **Confirmability**

The participants reached consensus during the validation session on finalising the strategic plan and therefore ensured the confirmability of the data.

7.3.6 Ethical considerations

The researcher upheld the ethical principles of beneficence, privacy, confidentiality, justice and consent in this phase (see chapter 5, section 5.7).

7.4 FINAL STRATEGIC PLAN

After validation of the draft strategic plan, the researcher worked on the amendments and developed the final strategic plan that can be implemented to facilitate the integration of family planning and HIV services (see table 7.11).

Table 7.11 Final strategic plan (outcome)

Strategy	Actions	Method	Who responsible	Time-frame
Leadership and management	Increase the salary scale and benefit packages for technical and administrative staff of the public health centre, sub-city and Addis Ababa City Administration health bureau (AACAHB) (**motivation**)	1. Assess the current salary scales and benefit packages in other governmental and non-governmental organizations. 2. Use the above findings to write a motivation to secure the budget. 3. Adjust the salary and other benefit packages of technical and administrative staff public health centre, sub-city and Addis Ababa city administration health bureau (AACAHB)	Human resources (HR) along with finance and administration departments at the public health centres, sub-cities, Addis Ababa city administration health bureau (AACAHB) and MOH	Once and repeat every five years
	Organize award ceremonies for service providers with outstanding performances to motivate others (**motivation**)	1. Organize an annual award ceremony. 2. Nominate awardees with outstanding performance at the public health centre level 3. Present the award to the nominees at the end of the fiscal year	HR department along with supervisors of service providers at the public health centres, sub-city offices and AACAHB	Annually
	Organize retreat programmes for all staff working at public health centres, sub-cities and AACAHB to manage the burnout syndrome (**motivation**)	1. Establish an ad hoc committee in each sub-city health office (total 10 sub cities and one for AACAHB) 2. Arrange the venue agreed on for the retreat programme by sub-city and AACAHB 3. Prepare budget breakdown and secure the budget for the retreat programme for 10 sub-cities and AACAHB 4. Invite all staff working at public health centre, sub-cities and AACAHB to participate in the retreat programme. 5.Conduct retreat programme at each sub-city level (10 sessions) and 1 session for AACAHB	Ad hoc committee in each sub-city in coordination with HR department at the public health centres, sub-cities, AACAHB and MOH Head of AACAHB will approve the budget	Annually
	Organize training opportunities in leadership and management for programme officers and family health team from sub-city offices and medical directors and process owners from public health centres (**motivation**)	1.Prepare and secure a detailed budget for the training 2.Prepare the agenda for the training and training materials/documents 3.Select appropriate participants from all sub-city offices (20 participants for each session) and a total of 20 sessions to train 400 participants (24	Programme officers and heads or deputy heads of sub-cities/AACAHB will approve the budget External consultants (experts) will facilitate the training	Annually

Strategy	Actions	Method	Who responsible	Time-frame
		programme officers and 58 family health team members, 80 medical directors and 240 process owners/head nurses from public health centres) 4. Select trainers or facilitators and communicate and ensure their agreement 5.Decide on the venue and invite participants for the training 6.Conduct the training		
	Recruit dedicated service providers to offer the integrated FP and HIV services (**recruitment and deployment**)	1. Allocate adequate budget for new recruitment position 2. Prepare clear job description. 3. Advertise and recruit appropriate candidates through competitive process	HR department at public health centres, sub-city offices and AACAHB	Annually
	Assign service providers to offer the integrated FP/HIV services for long-term appointment in family planning or HIV service provision (**recruitment and deployment**)	1. Provide orientation before deployment for new service providers 2. Deploy the new and existing service providers for at least two consecutive years' assignment to provide the integrated FP and HIV service without rotation in every 6 months	HR department and process owners/head of public health centres and sub-city offices	Biannually
	Develop/revise the standard operating procedures (SOP) to create an enabling environment at the public health centre level -Identify/revise the roles of different departments/actors -Coordinate among the different department/actors **(enabling environment)**	1. Assessment of all the available policies, guidelines and practices through desk reviews and interviews with service providers in the public health centre, programme officers, managers and other stakeholders 2. Decide to revise the existing standard operating procedures (SOP) or develop a new SOP based on the findings from the above 3. Revise or develop the draft SOP 4. Finalize the draft SOP and final approval 5. Distribute copies of the approved SOP to each public health centre	All representatives of departments from AACAHB and MOH, international and local NGOs working on family planning and HIV AACAHB will approve the final SOP	Develop once and revise every three years
	Establish continuous online/face-to-face learning forums to create ownership by all level managers **(ownership)**	1. Identify the topics of learning 2. Select participants from the public health centres, sub-cities and AACAHB 3. Select facilitators for the learning forum 4. Conduct online/ face-to-face meetings every	Service providers, programme officers will propose topics of learning Process owners or head/deputy head of the public	Quarterly by public health centres and sub cities Biannually along with

Strategy	Actions	Method	Who responsible	Time-frame
		quarter and discuss good practice and challenges in the integrated FP and HIV services 5. Evaluate the learning forums	health centres, sub-city health offices will facilitate the forum AACAHB evaluate the learning forum	AACAHB
	Conduct review meeting to improve the waiting time of clients at the public health centre level **(ownership)**	1. Prepare a budget breakdown and secure the budget for the review meeting 2.Prepare the agenda for the review meeting 3. Decide on the venue and invite service providers who work in the integrated FP and HIV services, process owners, head of health centre, programme officers, family health team, head/deputy head of sub-city 4. Conduct the review meeting in each sub-city (10 sessions) and discuss how to work efficiently for each consultation to be completed in <15 minutes (shorten the waiting time of clients)	Service providers, public health centre heads/process owners, sub-city heads, programme officers, family health team and AACAHB	Biannually
Capacity building	Organize and conduct one week ToT (Training of trainers) training programmes on integrated FP and HIV for service providers (**training of service providers**)	1.Prepare and secure a detailed budget for the ToT (Training of trainers) training 2. Prepare the agenda for the training and training materials 3. Select appropriate participants from selected public health centres (20 participants for each session) with a total of 10 sessions to train 200 participants from public health centres 4. Select trainers or facilitators and communicate and ensure agreement 5. Decide on the venue and invite participants for the training 6. Conduct the training	Programme officers and heads or deputy heads of sub-cities/AACAHB will approve budget Programme officers and external consultants will facilitate the training	Annually
	Organize and conduct one week roll-out training in integrated FP and HIV for service providers (t**raining of service providers**)	1.Prepare and secure a detailed budget for the roll-out training 2.Prepare the agenda for the training and training materials 3.Select appropriate participants from public health centres (20 participants for each session with a total of 60 sessions to train 1200 participants from all public health centres in Addis	Programme officers and heads or deputy heads of sub-cities/AACAHB will approve budget Trained service providers and programme officers will facilitate the training	Biannually

Strategy	Actions	Method	Who responsible	Time-frame
		Ababa) 4. Select trainers or facilitators and communicate and ensure the agreement 5. Decide on the venue and invite participants for the training 6. Conduct the training		
	Engage women in the planning, implementation and evaluation of the FP and HIV programme to empower them to decide on their choices regarding FP and HIV **(women empowerment)**	1.Nominate representatives of women from the women's development army (WDA) 2. Invite representatives to participate in planning sessions and different meeting and events 3. Invite representatives to visit the public health centres and observe the implementation 4.Invite representatives to participate in monitoring and evaluation of programmes	Service providers and programme officers at sub-city health offices and AACAHB Women's development army (WDA)	Quarterly
	Provide training for community members such as Women's development army (WDA)/ Health development army (HDA) **(women empowerment)**	1. Prepare and secure a detail budget for the training 2. Prepare the agenda for the training and training materials 3. Select appropriate participants from villages (30 participants for each session) with a total of 50 sessions to train 1,500 participants from all villages of Addis Ababa (328 villages) 4. Select trainers or facilitators and communicate and ensure the agreement 5. Decide on the venue and invite participants for the training 6. Conduct the training	Programme officers and heads or deputy heads of sub-cities/AACAHB will approve budget Trained service providers and programme officers will facilitate the training	Biannually
	Provide training in programme management to build the capacity of family health teams at the sub-city and AACAHB level **(family Health Team)**	1. Prepare and secure a detailed budget for the training 2. Prepare the agenda for the training and training materials 3. Select appropriate participants from villages (20 participants for each session with a total of 3 sessions to train 58 participants from all 10 sub-city health offices 4. Select trainers or facilitators and communicate & ensure the agreement	Programme officers and heads or deputy heads of sub-cities/AACAHB will approve budget Programme officers and external consultants will facilitate the training	Annually

Strategy	Actions	Method	Who responsible	Time-frame
		5. Decide the venue and invite participants for the training 6. Conduct the training		
	Organize mentorship programme for service providers (**training of service providers**)	1. Identify the topics of learning 2. Select mentees (junior service providers) from the public health centres 3. Select volunteer mentors (senior service providers and program officers) for the mentorship program 4.Pair the mentees and mentors and conduct the mentorship program through a face- to-face meeting or phone call once every month for one year 5. Evaluate the mentorship program at the end of the year	Service providers, process owners and head of public health centres and programme officers at sub-city health offices and AACAHB	Annually
Implementing polices and guidelines	Provide technical support to service providers at the public health centres to understand and implement existing policies and other supporting guidelines **(policies)**	1. Plan for supportive supervision visit 2. Prepare checklists of supervisory visits 3. Conduct supportive supervision visits and provide on-the-job training/orientation on how to utilize the existing policies and guidelines 4. Write report and provide written feedback	Service providers will be supervisors Programme officers and deputy/head of sub-city will be supervisors at sub-city health offices and AACAHB	Quarterly
	Develop standard operating procedures (SOP) that can guide the implementation of policies and guidelines to facilitate the integration of family planning and HIV services **(guidelines)**	1. Assessment of all the available policies, guidelines and practices through desk reviews and interviews with service providers in the public health centre, programme officers, process owner/head of the public health centre and other stake holders 2. Develop SOP that will guide how to implement the existing policies and guidelines at the public health centre level 3. Draft SOP 4. Finalize the draft SOP and final approval 5. Distribute the copies of the approved SOP to each public health centre	All representatives of department from AACAHB and MOH, international and local NGOs working in FP and HIV AACAHB will approve the final SOP	Develop once and revise every five years
	Revise the existing curriculum to incorporate the integrated family	1. Assessment of all the available curriculum documents in the higher institutions for health	All representatives from the MOE and MOH, international	Revise once and repeat every five years

Strategy	Actions	Method	Who responsible	Time-frame
	planning and HIV services **(guidelines)**	students 2.Revise the existing curriculum and incorporate integration of FP and HIV services 3.Conduct familiarization workshops with teachers at health colleges/universities 4.Finalize the revision of the curriculum 5.Print and distribute the copies of the revised and approved curriculum to health colleges/universities	and local NGOs working in FP and HIV MOE will approve the final curriculum MOH and MOE (Ministry of education)	
Advocacy/ Awareness	Promote the integrated FP and HIV services using local media in different languages **(promotion)**	1. Secure budget and develop messages to be disseminated 2. Pre-test the messages and update the messages 3. Select the local media agency and sign work agreement 4. Rent airtime (10 minutes for one month) with the selected media agency 5. Disseminate the messages twice a week	Programme officers and heads or deputy heads of sub-cities/AACAHB will approve budget. Local media agencies will air messages	Monthly
	Develop and distribute tailored BCC materials (posters, leaflets, flayers, brochures, magazines, etc) related to integrated family planning and HIV services to the community **(communication)**	1. Secure budget and develop the draft BCC materials in different languages 2. Pre-testing of BCC materials 3. Revise the BCC materials and incorporate the comments from pre-testing in the community 4. Printing of BCC materials 5. Distribute BCC materials to the public health centre and then to clients	Programme officers and heads or deputy heads of sub-cities/AACAHB will approve budget	Develop annually Distribute daily
	Provide interpersonal communication training for service providers for effective communication **(communication)**	1. Prepare and secure a detailed budget for the training 2. Prepare the agenda of the training and training materials 3. Select appropriate participants from public health centres (20 participants for each session with a total of 60 sessions to train 1,200 participants working in FP and HIV services 4. Select trainers or facilitators and communicate and make an agreement 5. Decide on the venue and invite participants for	Programme officers and heads or deputy heads of sub-cities/AACAHB will approve budget Programme officers and external consultants will facilitate the training	Annually

Strategy	Actions	Method	Who responsible	Time-frame
		the training 6. Conduct the training		
	Educate clients to increase the awareness regarding the integrated FP and HIV services **(knowledge)**	1. Develop plan and secure the budget 2. Do a quick formative assessment 3. Develop operational guidelines based on the above findings that includes methodology, target audiences, venue, etc 4. Educate clients according to the operational guidelines 5. Evaluate the outcome of health education	Programme officers and heads or deputy heads of sub-cities/AACAHB will approve budget	Develop annually Educate daily
	Provide quality counselling to improve clients' knowledge by service providers in the integrated FP and HIV services **(knowledge)**	1. Develop/adapt self-assessment checklist 2. Conduct self-assessment 3. Regularly check to ensure the quality of counselling according to the standard protocols 4. Provide training on counselling as per the above findings	Service providers will do the self-assessment and programme officers will check and provide training	Daily
	Advocate for and convince higher officials and political leaders on integration of family planning and HIV service **(advocacy)**	1. Prepare evidence-based presentations on the integrated FP and HIV services 2. Invite higher officials and political leaders for round table discussion 3. Present the findings to leaders and discuss the need for an integrated FP and HIV services 4. Receive directions from higher officials and politicians	Programme officers and head of AACAHB	Annually
Infrastructure	Prepare adequate room/ space at the public health centres to provide the integrated FP and HIV service **(infrastructure)**	1. Establish an ad hoc committee by sub-city (10 ad hoc committees) 2. Observe the existing room arrangement in each health centre and suggest the possible rearrangements 3. Re-arrange the space/rooms for the provision of FP and HIV services according to the above suggestion	Public health centre heads and program officers	Annually

Strategy	Actions	Method	Who responsible	Time-frame
	Build the new extra blocks/rooms or renovate the existing infrastructure of the public health centres to facilitate the integrated FP and HIV services. **infrastructure)**	1. Decide on the design of the building 2. Secure the budget 3. Provide quotations to contactors through official administrative procedure and select the contractor 4. Build the attached wing or new building 5. Handover the final building blocks to AACAHB	Administrative department of the public health centre, sub-city and AACAHB will secure the budget Heads or deputy heads of Sub cities and AACAHB will approve budget	Once and renovation every year
	Procure all the necessary medical equipment and supplies for the public health centre **(medical equipment)**	1. Identify the list of medical equipment and supplies to be procured 2. Secure the budget 3. Provide quotations to suppliers through official administrative procedures and select supplier 4. Procure medical equipment and supplies 5. Distribute to the public health centres	Procurement committee, programme officers and administrative department of the public health centre, sub-city and AACAHB Heads or deputy heads of sub-cities and AACAHB will approve the budget Selected company	Annually
	Repairing non-functional medical equipment in public health centres **(medical equipment)**	1.Identify medical equipment that need maintenance by sub-city 2. Prepare and secure detailed budget 3. Provide quotations and select the company through official administrative procedures 4. Provide maintenance service for non-functional medical equipment	Program officers and administrative department of the public health centre, sub-city and AACAHB Heads or deputy heads of sub-cities and AACAHB will approve the budget Selected company	Annually

7.5 SUMMARY

This chapter discussed and presented the final strategic plan the could be implemented to facilitate an integrated FP and HIV services at public health centre level in Addis Ababa and elsewhere in Ethiopia. The participants validated the draft strategic plan and agreed on the final strategic plan.

Chapter 8 concludes the study, describes its limitations and makes recommendations for practice and further research.

CHAPTER EIGHT

CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

8.1 INTRODUCTION

This chapter summarises the development and validation of the draft strategic plan, briefly describes the limitations of the study, and makes recommendations for practice and further study.

8.2 SUMMARY

Integration of family planning and HIV services is one of the key maternal and child health services offered, but with little implementation at the public health centre level in Addis Ababa, Ethiopia (Addis Ababa City Administration health Bureau 2014). Improving access to family planning through integration with HIV services to reduce maternal and child morbidity and mortality is a concern. Integrating family planning (FP) and HIV services in a “one-stop” approach can therefore be convenient for clients who wish to use both services. It can minimize missed opportunities to address the family planning needs of people living with HIV in a cost-effective way that will increase access to information and services (Johnson et al., 2012:7). The development of an appropriate and cost-effective strategic plan is essential to facilitate the implementation of an integrated FP and HIV services in Ethiopia that can contribute to planned pregnancies as well as HIV prevention and treatment for better health outcomes of mothers and children.

The aim of the study was to develop a strategic plan that could facilitate the implementation of an integrated FP and HIV services at public health centre level in Addis Ababa, Ethiopia.

In order to achieve the aim, the objectives of the study were to:

- Describe the challenges and opportunities of clients using integrated FP and HIV services in public health centres in Addis Ababa, Ethiopia.

- Describe the challenges and opportunities of service providers' regarding integrated FP and HIV services in public health centres in Addis Ababa, Ethiopia.
- Identify strategies that could facilitate the implementation of an integrated FP and HIV services at the public health centre level.
- Develop a strategic plan that could facilitate the implementation of an integrated FP and HIV services at the public health centre level in Addis Ababa.

A strategic plan refers to a recognized set of activities or broad plans of action necessary to achieve an organisation's goals and objectives (Nickols 2016:6). In this study, the strategic plan referred to a plan of action that could facilitate the implementation of an integrated FP and HIV services at the public health centre level. The researcher used the change logic model to guide the study, and Ortrun's (2002:143-149) process planning model as adapted by Lubbe et al. (2014:6397) to develop the strategic plan.

The researcher conducted a literature review and collected data from client interviews and service providers' self-administered questionnaires to obtain inputs for developing the strategic plan (phase 1). In phase 2, the participants in two nominal groups identified and voted on strategies that formed the basis for the development of the strategic plan to facilitate the integration of FP and HIV services.

The development of the strategic plan focused on the five most important strategies identified by the participants (see chapter 7, sections 7.2.3.1-7.2.3.5). These were leadership and management; capacity building; policy, guidelines and strategies; awareness/advocacy, and infrastructure. For each strategy the participants proposed and identified actions to achieve the strategy; methods to implement the actions; who would be responsible for the implementation, and a time-frame for the implementation.

The researcher then developed a draft strategic plan. The final stage was then to validate and finalise the draft strategic plan. The purpose of validation was to provide an opportunity for the participants to provide their comments and inputs on the draft strategic plan and agree or disagree on the content of the final and approved strategic plan to ensure the correctness of the contents for the final strategic plan.

8.2.1 Client challenges regarding using integrated FP and HIV services in public health centres in Addis Ababa, Ethiopia

The study found that a lack of awareness of various family planning methods, lack of male involvement, the type of relationship they had, and the availability of transportation to reach the health facility were statistically significant challenges associated with the use of FP services. Low client satisfaction was the only challenge statistically associated with HIV testing. The family's monthly income level, lack of awareness of FP methods and long waiting times were statistically significant challenges associated with the use of integrated FP and HIV services. Based on these challenges the nominal group participants identified strategies that could be the basis for the development of the strategic plan.

8.2.2 Client opportunities regarding using integrated FP and HIV services in public health centres in Addis Ababa, Ethiopia

The findings indicated that clients' positive experiences included good counselling received, men's involvement, and satisfaction were opportunities that could positively influence FP, HIV as well as integrated FP and HIV services.

8.2.3 Service providers' challenges regarding integrated FP and HIV services in public health centres in Addis Ababa, Ethiopia

The study found that a lack of training for service providers in family planning and HIV integration, low awareness of FP policies/guidelines and FP and HIV integration policies/guidelines were statistically significant challenges identified by service providers. In addition, infrastructure, shortage or unavailability of medical resources and service providers were also challenges regarding FP, HIV and the integrated FP and HIV services.

8.2.4 Service providers' opportunities regarding integrated FP and HIV services in public health centres in Addis Ababa, Ethiopia

Adequate numbers of service providers, regular availability of behavioural change communication materials , accessibility of the services, adequate budget for FP and HIV

programmes, good counselling skills and the availability of medical resources were identified as opportunities that positively affected the utilization of FP, HIV and the integrated FP and HIV services. Based on these opportunities, the nominal group participants identified and prioritized strategies for the development of the strategic plan. The strategies were leadership and management; capacity building; implementation of policies and guidelines; advocacy/awareness and infrastructure.

8.2.5 Develop a strategic plan that can facilitate the implementation of an integrated FP and HIV services at the public health centre level in Addis Ababa

The development of the strategic plan was accomplished by triangulating the results obtained from the two phases with reference to the literature review. The researcher used the change logic model to guide the study and the process planning model (Ortrun 2002; Lubbe & Roets 2014:6397) to develop the strategic plan. The process planning model has three major components and they applied as follows:

- Vision (facilitate the implementation of an integrated family planning and HIV services)
- Context (clients and service providers involved in identifying challenges and opportunities in phase 1 and programme officers who identified and voted for the strategies)
- Practice (facilitating the implementation of integrated FP and HIV services at the public health centre level).

The draft strategic plan (see chapter 7, table 7.8) was validated during a validation meeting in which the NGT participants incorporated their comments/inputs on the institution's needs, budget, and the human resources available (see chapter 7, table 7.10). The agreed on validated strategic plan was finalised and can be used to facilitate the implementation of an integrated FP and HIV services at the public health centre level. The final strategic plan is presented in chapter 7, table 7.11.

The strategic plan focuses on the improvement of leadership and management; improving the capacity of service providers, family health team and women's development army (WDA); implementing policies and guidelines; improving the

awareness of clients, advocacy, and improving infrastructure and efficient supply of logistics. The public health centres, sub-city health offices and Addis Ababa City Administration Health Bureau in collaboration with the Ministry of Health, Addis Ababa City Administration Office and other stakeholders/partners should implement the final strategic plan to facilitate the implementation of an integrated FP and HIV services at the public health centre level.

8.3 LIMITATIONS

The researcher identified the following limitations in the study. Phase 1, which explored and described the challenges and opportunities for the implementation of integrated FP and HIV services, was only conducted at selected public health centres due to budgetary constraints. The effects of this limitation were reduced by the inputs from the programme officers in phase 2 as they were from all Addis Ababa sub-city health offices and were directly involved in the identification of the strategies as well as the validation of the final strategic plan.

8.4 RECOMMENDATIONS

Based on the findings of the study, the researcher makes the following recommendations for practice/implementation and further research.

8.4.1 Practice/implementation

Any strategic plan is only as effective as the methods used to share the plan with the relevant stakeholders responsible for the implementation. The researcher recommends that the strategic plan be tested and adapted in the rest of the country under the leadership of the Ministry of Health. The Ministry of Health should take the lead and responsibility of ensuring the implementation of the final strategic plan with involvement of stakeholders and partners.

The Ministry of Health and the Addis Ababa City Administration Health Office should incorporate the strategic plan in their policy and strategic documents. The Addis Ababa city administration health bureau and sub-city health offices should provide the researcher with the opportunity to organize workshops in orientation on the strategic

plan for all service providers to enhance implementation. Programme officers, service providers (nurses, midwives, health officers and physicians) should be equipped and encouraged to take ownership of the strategic plan.

After the implementation of the final strategic plan, the integration of FP and HIV services should lead to an increase in the utilization of family planning and HIV services and ultimately improve maternal and child health.

8.4.2 Further research

Further studies should be conducted on the following topics:

- Challenges and opportunities for the implementation of an integrated FP and HIV services in the private health sector and public hospitals.
- Service providers' perceptions of the implementation of an integrated FP and HIV services in the private health sector in Addis Ababa, Ethiopia.
- Factors in the facilitation of integrated FP and HIV services at all health facility levels in Ethiopia.
- An assessment of the implementation and success of the strategic plan in the facilitation of an integrated FP and HIV services.

8.5 CONCLUSION

The researcher is of the opinion that the active involvement of important stakeholders, namely the programme officers, in phase 2 of this study will enhance the "buy in" into the strategic plan. Using the process planning model in developing the strategic plan provided scientific evidence for the development and implementation of the plan. Future assessment will facilitate better integrated FP and HIV service models that contribute to the improvement of maternal and child health.

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ANNEXURES

ANNEXURE 1: Questionnaire used to gather data from clients

Questionnaire to develop strategies for the integration of family planning and HIV service at the health centre level in Addis Ababa, Ethiopia

Study Participants: Clients
Client code number……..
Name of the health centre……..
Sub city of the client……
District of the client……..

It is important that you answer the questions as honest as you can. Please answer all the questions. The questionnaire consists of the following sections.

Section A: Biographical information
Section B: Fertility and Family planning service
Section C: HIV service
Section D: Integration of Family planning and HIV service

Please ensure to respond all questions.

Example

A. Biographical information

Example:

Please answer the following questions by placing a check mark (√) in the appropriate box

1. What is your biological sex?

Male……..… ☐

Female…….. ☑ √

Section A: Biographic information

1. What is your age?
   In complete years (e.g.26) ……...

Please answer the following questions by placing a check mark (√) in the appropriate box

2. What is your religion?
   - 2.1. Orthodox……. □
   - 2.2. Muslim……. □
   - 2.3. Protestant……..... □
   - 2.4. Catholic……... □
   - 2.5. Other (specify)……... □
3. What is your occupation?
   - 3.1. Merchant……. □
   - 3.2. Student…….…..... □
   - 3.3. Farmer……..... □
   - 3.4. Housewife…..... □
   - 3.5. Civil servant..... □
   - 3.6. Others (Specify)…….……..... □
4. What is your highest educational level?
   - 4.1. Able to read and write…….. □
   - 4.2. Elementary school……..... □
   - 4.3. High school (10th or 12th completed)……..…. □
   - 4.4. TVET/diploma level……..... □
   - 4.5. Basic degree……..... □
   - 4.6. Master's degree……..... □
   - 4.7. Other (mention) ……..... □
5. What is your marital status?
   - 5.1. Married…….……... □
   - 5.2. Single…..... □
   - 5.3. Widowed…….……. □
   - 5.4. Divorced……..……... □
   - 5.5. In a relationship…….…..... □
6. To which ethnic group do you belong?
   - 6.1. Oromo…..... □
   - 6.2. Amhara……..……... □
   - 6.3. Tigrie……..... □
   - 6.4. Guragie……. □
   - 6.5. Others (Specify)…….…..…..... □
7. How much is the total monthly income of your family?
   In Ethiopian birr (e.g.1, 000.00 ETB) ……...

Section B: Fertility and Family Planning service

1. Have you ever been pregnant?

   1.1. Yes…….. □ 1.2. No……..□ ***if your answer is no, please go to #7 for futher questions***

2. How many times have you been pregnant?
   In numbers (e.g. 3) ……

3. How many of your children are still alive?
   In numbers (e.g. 2) ……
4. Did you plan to have all your children?
   4.1. Yes……□ 4.2. No……□ ***if your answer is yes, please go to # 7 for further questions***
5. If your answer is no, please explain the reason for unplanned pregnancies?
   5.1. Lack of awareness about contraceptives……..…..... □
   5.2. Inaccessibility to contraceptives…….……..… □
   5.3. Casual sexual intercourse…….……..... □
   5.4. Rape/sexual violence……. □
   5.5. Failure of contraception method used……..……..... □
   5.6. Others (Specify)……..... □
6. If your contraceptive method failed,Explain why?
   ……
   ……
7. Did you see/consult a health care provider for any services today?
   7.1. Yes……..□ 7.2. No……□ ***if no, please go to number 23 for further questions***
8. What was the primary service that you came for today? Please tick only one option.
   8.1. To receive family planning/contraception service ……..... □
   8.2. To receive HIV service ..…….... □
   8.3. To receive both family planning and HIV services…….. □
   8.4. To receive any other health care services……..... □

If you didn't come to the health centre primarily for family planning please go to # 22 for further question

9. What type of family planning methods/contraceptive did you receive today?
   9.1. Oral contraceptive pills…… □
   9.2. Male condoms……...…□
   9.3. Injection……..... □
   9.4. Implants…… □
   9.5. IUDs…..... □
   9.6. Any other (mention them)……...□
10. Did you choose your own contraceptive or family planning method today?
    10.1. Yes……..□ 10.2.No…….□ ***if yes, please go to # 12 for further questions***
11. If no, what is the reason that you didn't choose your own method of contraceptives?
    11.1. Husband opposition……..…. □
    11.2. Service provider influence……..…… □
    11.3. Peer influence…… □
    11.4. My choice is not available …….……. □
    11.5. Other reasons(name them please)…… □

During your consultation today, did the service provider

12. Ask the reason for your visit
    12.1. Yes……..□ 12.2. No……..□

13. Ask specifically about any problems you were having or have had with the current method of contraeption before today's choosed contraceptives?
    13.1. Yes…….. □ 13.2.No…….□
14. Suggest any action(s) to resolve the problem?
    14.1. Yes……□ 14.2. No……...□
15. Discuss about the reproductive goal or contraception?
    15.1. Yes……□ 15.2. No……...□
16. Provide information about different family planning methods or contraceptive methods?
    16.1. Yes…… □ 16.2.No……..…□
17. Ask about your family planning or contraceptive preference?
    17.1. Yes……□ 17.2.No……..…□
18. Explain to you the effects that the contraceptives might have?
    18.1. Yes…….. □ 18.2. No…..…… □
19. Tell you what to do if you have any problems with the method you choose today?
    19.1. Yes…….□ 19.2.No……...□
20. Make a follow-up appointment for you so that you know when to return
    20.1. Yes……..□ 20.2. No……..…..□
21. Give you printed information on family planning /contraceptives when she/he discuss it with you?
    21.1. Yes……..….□ 21.2. No……..……□
22. How long did you wait between the time you first arrived at this facility and the time you saw a service provider to assist you for a service today?
    22.1. Less than 15 minutes …….……..... .□
    22.2. Between 16-30 minutes……... □
    22.3. Between 31-45 minutes…….……..…… □
    22.4. Between 46-60 minutes…….…. □
    22.5. Between 61-90 minutes…..... □
    22.6. More than 90 minutes…….. □
23. What was the main means of transport that you used to get this facility today?
    23.1. Walked……..... □
    23.2. Public bus …….……. □
    23.3. Taxi…….……. □
    23.4. Private vehicle……. □
    23.5. Other (Specify)…….. □
24. What have you done or did you use to avoid a pregnancy before today's visit?
    24.1. Nothing…….. □
    24.2. Oral contraceptive pills…… □
    24.3. Male condoms……..... □
    24.4. Injectable contraceptive……...…... □
    24.5. Implants…….…. □
    24.6. IUDs……. □
    24.7. Mention any other methods used……..... □
25. Where did you first hear about family planning or contraceptive methods?
    25.1. Radio/Television……...…. □
    25.2. Health provider…….... □

25.3. Family members…….. □

25.4. Friends…..... □

25.5. Neighbor……..…. □

25.6. Health extension worker..... □

25.7. Any other (please explain)……..…. □

26. Please place a check mark (√) to all the family planning methods or contraceptives you know?

26.1. Oral contraceptive pills…… □

26.2. Male condom…… □

26.3. Female condoms……..□

26.4. Emergency contraceptives……..……□

26.5. Injectable…….…..... □

26.6. Implants……...….. □

26.7. IUDs……..…….. □

26.8. Permanent methods…….…… □

26.9. Others (Specify)……..... □

27. Do you think that any of the following aspects are challenges to the use family planning or contraceptive methods?

27.1. I didn't obseve any challenges…… □

27.2. Religion……...… □

27.3. Cultural barrires……..... □

27.4. Misconceptions…….. □

27.5. Minimal access to family planning…….. □

27.6. Cost of contraceptives…….. □

27.7. A lack of knowledge…….. □

27.8. Other reasons, please explain……□

28. Please explain the reasons for the answers given in question 27 …….
…….

29. Have you ever discussed the use of contraceptives or family planning with your husband or partner?

29.1. Yes……..□ 29.2. No……□ ***if yes, please go to section C for further questions***

30. If no, why you did not discuss it with your husband or partner?
……..…..

Section C: HIV/AIDS

1. Have you ever tested for HIV?

1.1. Yes…….□ 1.2. No …….□ If yes when was the last time that you have been tested for HIV

……../……./……..

DD MM YY ***If no, please go to question # 7 for further questions***

2. What was the main reason for your HIV testing?

2.1. Exposure due to unprotected sexual contact with an HIV positive person…… □

2.2. The risk of STI diagnosis……..... □

2.3. Due to pregnancy……..…… □

2.4. Because I attended the family planning integrated service…..… □

2.5. The service providers recommended the test as a routine test…. □

2.6. I wanted to donate blood ……..…..... □

2.7. I wanted to know myself……...… □

2.8. Marriage reason or having a boy freind……..….. □

2.9. Other (Specify)……..…. □

3. What was the result for HIV?

3.1. Negative……. □

3.2. Positive……..… □

3.3. I don't want to disclose…… □

4. Have you disclosed your HIV status to your partner?

4.1. Yes……□ 4.2. No……..□ ***if yes, please go to number 7 for further questions***

5. If no, please explian why you didn't disclose?

…….

6. What kind of HIV service (s) have you received from this health facility today?

6.1. I didn't receive any HIV services today……... □

6.2. Voluntary HIV counseling …….. □

6.3. Voluntary HIV testing……... □

6.4. Provider initiated HIV counseling ……..... □

6.5. Provider initiated HIV testing…… □

6.6. Prevention of mother to child transmission…….……. □

6.7. Antiretroviral therapy……..……. □

6.8. I didn't receive any HIV services today……..... □

6.9. Others (Specify)……..…….. □

If you are HIV negative or if you have never tested for HIV please ignore questions 8 to 14 and proceed to section D. Please indicate in the approrite box

7. It is difficult to tell the people about my HIV infection

7.1. Agree…□ 7.2. Sometimes agree…. □ 7.3. Neutral……..□ 7.4. Sometimes disagree…. □ 7.5. Disagree……..□

8. I feel guilty that I am HIV positive

8.1. Agree…□ 8.2 sometimes agree…. □ 8.3. Neutral……..□ 8.4. Sometimes disagree…. □ 8.5. Disagree……..□

9. I am ashamed that I am HIV positive

9.1. Agree…□ 9.2. Sometimes agree…. □ 9.3. Neutral……..□ 9.4. Sometimes disagree…. □ 9.5. Disagree……..□

10. I feel worthless because I am HIV positive

10.1. Always……□ 10.2. Sometimes…. □ 10.3. Never…..□

11. I hide my HIV status from others

    11.1. Always….□ 11.2. Sometimes….□ 11.3. Never……..□

12. Exhibited hostility or a lack of respect towards to you

    12.1. Agree…□ 12.2. Sometimes agree…. □ 12.3. Neutral……..□ 12.4. Sometimes disagree…. □ 12.5. Disagree……..□

13. Given you less attention in health facility than other patients or clients?

    13.1. Agree…□ 13.2 Sometimes agree…. □ 13.3. Neutral……..□ 13.4. Sometimes disagree…. □ 13.5. Disagree……..□

Section D: Integration of family planning and HIV services

1. Have you received an integrated family planning and HIV services today regardless of the approaches?

   1.1. Yes……□ 1.2. No……..□ ***if No, please go to number 3 for further questions***

2. Please indicate how the integrated service was provided to you?

   2.1. Same room and same service provider…… □

   2.2. Same room and different service providers…….. □

   2.3. Different rooms and different service providers……... □

   2.4. Different service providers and different facilities……..….. □

   2.5. Other (mention)……..... □

3. If no , what is the reason that you didn't receive both FP and HIV services

   3.1. Service providers are not willing……..... □

   3.2. Long waiting time…….. □

   3.3. I didn't know about that the integration service is available……..… □

   3.4. I did not want this integrated service……..…….…. □

   3.5. The integrated service is too expensive……..…….…… □

   3.6. Mention any other reason……...… □

4. Are you interested to receive integrated services for both family planning/contraceptive and HIV services at the same time in future?

   4.1. Yes…….□ 4.2. No……□ ***if yes, please go to question # 6 for further questions***

5. Please write down the reasons why you are not interested to receive integrated family planning and HIV services in future?

   …….
   …….
   ……

6. How would you prefer to receive the integrated services in future?

   6.1. Same room and same service provider…….…. □

   6.2. Same room and different service providers…… □

   6.3. Different room and different service providers…… □

   6.4. Different service providers and different facilities……... □

   6.5. Other (mention)……..... □

7. Please indicate in the appropriate box which aspects will contribute positively to facilitate which of the integration of family planning and HIV services at the health centre level.
   - 7.1. If the facility set up is well equipped…….. ☐
   - 7.2. If the clients wanted to get an integrated FP and HIV service…….. ☐
   - 7.3. If the facility is more accessibility to our village…… ☐
   - 7.4. If the family planning and HIV services are given free of charge at the health Centre……. ☐
   - 7.5. Other (mention)…….. ☐
8. What are the challenges or the problems that you have observed with the integrated services?
   - 8.1. Increased waiting time……..…… ☐
   - 8.2. The integrated service is too expensive….....☐
   - 8.3. The service providers do not give quality care to both my HIV as well as my family planning requirements……..……..…… ☐
   - 8.4. Mention any other problems that you have experience……..……..…. ☐
9. Please indicate in the appropriate box how satisfied you are with the integrated service today?
   - 9.1. Highly satisfied…… ☐
   - 9.2. Satisfied…… ☐
   - 9.3. Somewhat satisfied……. ☐
   - 9.4. Not at all satisfied……. ☐
10. Why did you choose this facility for services today?
    - 10.1. Close to my home……..... ☐
    - 10.2. Convenient to operating hours……..... ☐
    - 10.3. Good reputation…… ☐
    - 10.4. Maintain confidentiality…….. ☐
    - 10.5. It is more affordable…..... ☐
    - 10.6. Was referred to this facility…..... ☐
    - 10.7. Provide good quality of service……..… ☐
    - 10.8. Providers treat patients well…..... ☐
    - 10.9. Other (Specify)…..... ☐
    - 10.10. Don't know ……..……..…….. ☐
11. Please describe all your suggestions to improve the integration of family planning and HIV services at the health centre level?

    ……
    …

Thank you for your time and the willingness to participate in this study!

ANNEXURE 2: Questionnaire used to gather data from service providers

Questionnaire to develop strategies for the integration of family planning and HIV service at the health centre level in Addis Ababa, Ethiopia

Study Participants: Health care service providers
Code number of the health worker……
Name of the health centre……
Sub-city of the health worker……
District of the health worker……..

It is important that you answer the questions as honest as you can. Please answer all the questions. The questionnaire consists of the following sections.

Section A: Biographical information

Section B: Fertility and Family planning service providers

Section C: HIV service providers

Section D: Integration of Family planning and HIV service

Please ensure to respond the questions according to the instructions provided.

Example

A. Biographical information

Example:

Please answer the following question by placing a check mark (√) in the appropriate box

1. What is your biological sex?
   - Male…… ☐
   - Female…….☑

Section A: Please answer the following questions by placing a check mark (√) in the appropriate box

1. In which health professional category are you registered in FMOH?
   - 1.1. Clinical nursing……..... ☐
   - 1.2. Midwifery nursing…….. ☐
   - 1.3. Public health nursing……. ☐
   - 1.4. Public health (Health officer)…….……..... ☐
   - 1.5. Other (Specify)……..…☐
2. What is your highest academic qualification?
   - 2.1. Diploma……. ☐
   - 2.2. Degree……..…. ☐
   - 2.3. Master's degree……..... ☐
   - 2.4. Other (specify)……..… ☐
3. What is your biological sex?
   - 3.1. Male…… ☐
   - 3.2. Female……..... ☐
4. What is your age?
   - 3.1. *[In complete years (e.g.26)]*…… ☐

5. What is your religion?
   - 5.1. Orthodox……..…… ☐
   - 5.2. Muslim……..……..… ☐
   - 5.3. Protestant…….……..... ☐
   - 5.4. Catholic…….…….. ☐
   - 5.5. Other (specify)…….……... ☐
6. What is your marital status?
   - 6.1. Married…… ☐
   - 6.2. Single……..… ☐
   - 6.3. Widowed……..… ☐
   - 6.4. Divorced…….. ☐
7. To which ethnic group do you belong?
   - 7.1. Oromo……... ☐
   - 7.2. Amhara…….…….. ☐
   - 7.3. Tigrie…….....☐
   - 7.4. Guragie……..…..… ☐
   - 7.5. Others (Specify)……..... ☐
8. How many years of experience do you have?

   [In complete years and months (e.g 2 years and 6 months)] Years **……**Months…….
9. In providing FP services? Years……Months**…..**
10. In providing HIV services? Years……Months…….
11. What is your current position in this health centre?
    - 11.1.Head nurse……..…….…..…☐
    - 11.2.Process owner…….……... ☐
    - 11.3.Service provider…….. ☐
    - 11.4.Other (Specify)……..,.. ☐

If you are fertility and family planning provider, please answer section B

Section B: Fertility and Family Planning service providers

1. Are you aware of the availability of the Ethiopian Family Planning related policies, strategies and guidelines?

   1.1. Yes……..□ 1.2. No……□ ***if no, please go to #7 for further questions***

2. Please name policies, strategies and guidelines regarding to FP that you are aware of

   ……
   ……..

3. Which of them are available in your facility?

   ……...
   ……..….

4. If some of them are not available in your facility, please explain why not available.

   …….

5. Have you used the above mentioned documents for reference in your practice as a family planning service provider?

   5.2. Yes……□ 5.2. No……□ ***if yes, please go to # 7 for further questions***

6. If not, please explain why did not use for reference?

   ……

7. Have you received any family planning training in the past 2 years?

   7.1. Yes…… □ 7.2. No……□ ***if no, please go to # 9 for further questions***

8. If yes, what type of training did you attend in the past 2 years

   ……..

9. If not, what are the reasons?

   ……..……...
   ……..

10. What do you think is the reasons why some women do not use contraception as part of the family planning service that you provide? Please tick all the appropriate answer

    10.1. A lack of knowledge…….……...…….…. □
    10.2. Lack of contraceptive options…….....…..… □
    10.3. Cultural beliefs……..…….…..… □
    10.4. Women do not have decision making power…….. □
    10.5. The geographic distance to the facility is far……... □
    10.6. Fear of side effects……..... □
    10.7. They cannot afford the contraceptives/family planning service… □
    10.8. The attitude of the service providers……..... □
    10.9. Any other reasons…….……... □

11. What do you experience as real challenges for the FP program in Addis Ababa?

    10.10. Poor supply chain system……... □
    10.11. Poor quality of family planning service……..…. □
    10.12. Shortage of budget/funding…….……..... □
    10.13. Shortage of skilled service providers……..… □
    10.14. Socio-cultural reasons of the community…..... □

10.15. Any others (Specify)……..…… □

12. Was there any problem with the availability of contraceptives in your facility for the last 6 months?

12.1. Yes……..□ 12.2.No……..□ ***if no, Please go to # 14 for further questions***

13. Which contraceptive method (s) was/were out of stock in the last 6 months?

……

……

14. Have you ever treated clients with side effects of contraceptive or FP methods?

14.1. Yes……. □ 14.2. No……□ ***if no, please go to # 16 for further questions***

15. What are the most common side effects of contraceptives that you had to address?

15.1. Bleeding…….…… □

15.2. Nausea…….…..…. □

15.3. Weight gain……..... □

15.4. Others (Specify)……..…..….. □

16. Have you attended to clients with complications related to family planning/contraceptive methods during the follow up time?

16.1. Yes……..□ 16.2. No……..□ ***if no, please go to # 18 for further questions***

17. What are the most common complications that you have come across?

17.1. Infection…….……..….. □

17.2. Abscess …….…….……. □

17.3. Paralysis…….…….…… □

17.4. Syncope…….……..…. □

17.5. Others (Specify)…….……..…… □

18. Does a male client come for contraceptives or family planning to your facility?

18.1. Yes……..□ 18.2. No…….. □

Please answer the following questions by indicating your choice with a tick in the appropriate box

19. Do you spend adequate time to each client for family planning counseling and advice?

19.1. Always……..□ 19.2. Sometimes…….... □ 19.3. Never……□

20. How often you followed REDI frame-work for FP counselling

20.1. Always ……..□ 20.2. Sometimes …….... □ 20.3. Never ……□

21. Do you give adequate information to all family planning clients?

21.1. Always ……..□ 21.2. Sometimes …….... □ 21.3. Never ……□

22. Do you give written information regarding contraceptives and family planning to clients?

22.1. Always …..…□ 22.2. Sometimes …….... □ 22.3. Never ……□

23. Do you allow clients to make an informed choice for a specific contraceptive or FP method?

23.1. Always ……..□ 23.2. Sometimes …….... □ 23.3. Never ……□

24. Do you make sure that you have good interaction with the client during counseling?

24.1. Always ……..□ 24.2. Sometimes …….... □ 24.3. Never ……□

25. Do you discuss with all Family planning clients the follow-up/return visit date for visit?

25.1. Always …..…□ 25.2. Sometimes …….... □ 25.3. Never ……□

26. Are all options , except permanent contraception available in your facility

26.1. Always …..…□2 6.2. Sometimes …….. □ 26.3. Never…..…□

If you are HIV service provider, please answer section C

Section C: HIV/AIDS service providers

1. Are you aware of the availability of the Ethiopian HIV/AIDS related policies, strategies and guidelines?

   1.1. Yes……..□ 1.2. No……□ ***if no, Please go to # 7 for further questions***

2. Please name the policies, strategies as well as the guidelines regarding to HIV/AIDS that you are aware of

   ……
   ……

3. Which of them are available in your facility?

   ……..
   …….

4. If some of them are not available to your facility, please explain why not available.

   …….

5. Have you used above mentioned documents for reference in your practice as a HIV/AIDS service provider?

   5.1. Yes……□ 5.2. No……□

6. If not, please explain why did not use for reference?

   ……

7. Have you received any HIV/AIDS training in the past 2 years?

   7.1. Yes…… □ 7.2. No……□ ***if no, please go to # 9 for further questions***

8. If yes, what type of training did you attend in the past 2 years

   ……..

9. If not, what are the reasons?

   ……..……...
   ……..

10. Which of the following groups of clients are the most at risk group who visits frequently to your health centre for HIV services?

    10.1. Sex workers…….. □
    10.2. Mobile workers……..…… □
    10.3. In school youth……...…... □
    10.4. Uniformed people……..... □
    10.5. Inmates……..... □
    10.6. Men who have sex with men…… □
    10.7. Intravenous drug users…….…. □
    10.8. Others (specify)…….. □

11. What are the available HIV preventive services that you offer in your facility?

    11.1. Behavioral change communication……..……... □
    11.2. Condom distribution…….…..... □
    11.3. STI diagnosis and treatment……...…. □
    11.4. HIV counseling…….……. □
    11.5. HIV testing ……..…… □
    11.6. Referral services…….…..... □
    11.7. Other (Specify)…….….. □

12. What are the available curative HIV services that you offer in your facility
    - 12.1. Co-trimoxazole prophylaxis……..... □
    - 12.2. Providing anti-retroviral therapy…….. □
    - 12.3. Nutrition care and support…….……..... □
    - 12.4. Clinical care for opportunistic infections……..... □
    - 12.5. Palliative care …..... □
    - 12.6. Diagnosis and treatment of tuberculosis……..…… □
    - 12.7. Other (Specify)…….……..…… □
13. Are all the above services always available?
    - 13.1. Yes…….□ 13.2. No…….□ ***if yes, please go to # 15 for further questions***
14. If not, please explain

    …….
15. What are the challenges that you observe regarding the HIV counseling and testing service
    - 15.1. Clients are not willing to disclose the results to their partners…….. □
    - 15.2. Clients have a lack of awareness on the availability of ART…… □
    - 15.3. There are shortage of HIV test kits…..……..…. □
    - 15.4. There is shortage of competent counselors……..... □
    - 15.5. Others (Specify)…….……..……. □
16. What do you think are the reasons for the low utilization of the male condom in an attempt to prevent the transmission of HIV?
    - 16.1. Women have low decision making powers……..... □
    - 16.2. Cultural barriers……..……..…. □
    - 16.3. Disclosure of HIV status to partner……..…. □
    - 16.4. Literacy level……..……..... □
    - 16.5. Having regular heterosexual partners……..…. □
    - 16.6. Poor counseling services……..……. □
    - 16.7. Other (specify)…….……..…. □
17. What are the challenges that you observe regarding the ART service
    - 17.1. ART drugs are out of stock …….…….. □
    - 17.2. Poor adherence of ART drugs……..……. □
    - 17.3. Low accessibility of ART service……..……. □
    - 17.4. Poor quality of care service……..…..…… □
    - 17.5. A lack of the involvement of private health sector…….…..…. □
    - 17.6. Other (specify)……... □
18. Generally, what do you think are the challenges related to HIV/AIDS services in public health centres in Addis Ababa?
    - 18.1. HIV infected clients are in denial……. □
    - 18.2. HIV infected persons do not make use of the services …… □
    - 18.3. HIV infected clients are afraid of Stigma and discrimination …..… □
    - 18.4. The services are expensive this not accessible…..... □
    - 18.5. Shortage of trained counselors……..…. □
    - 18.6. A shortage of commodities and supplies……..... □
    - 18.7. Physical infrastructure……..…. □

18.8. Poor monitoring system……...… ☐

18.9. Lack of guidelines……..……...… ☐

18.10. Shortage of standard operating procedures…….. ☐

18.11. Lack of transport ……...…. ☐

18.12. Lack of communications……. ☐

18.13. Poor referral system to the next health facility……..…… ☐

18.14. Minimal community support for HIV care …….. ☐

18.15. Others (Specify)……...… ☐

19. Do you think that the mass media improves the knowledge of HIV of the community?

19.1. Yes……. □ 19.2. No……□ ***If no go to #21 for further questions***

20. If yes, please explain how?

……

21. If No, please explain how?

……

22. Do you keep information about your client's confidentiality?

22.1. Always……..□ 22.2. Sometimes……. □ 22.3. Never……□

23. Do you provide the HIV test result on the same day as the HIV counseling

23.1. Always …...…□ 23.2. Sometimes …… □ 23.3. Never ……□

24. Do you provide partner notification card for all HIV counseling and testing clients?

24.1. Always ……..□ 24.2. Sometimes …... □ 24.3. Never ……□

25. Do you provide referral service for all HIV positive clients for additional service?

25.1. Always …...…□ 25.2. Sometimes …... □ 25.3. Never ……□

If you provide both Family planning and HIV services, please answer section D

Section D: Family planning and HIV service integration

1. Have you ever provide an integrated family planning and HIV service to clients attending the health facility where you work?

   1.1. Yes……□ 1.2. No……□ ***if no, please go to # 6 for further questions***

2. How many years you have given the integrated family planning and HIV services
   In complete years and months (e.g 2 years and 6 months). ……..years……..months
3. Which type of FP integration with HIV services do you provide?? Please tick all the appropriate boxes

   3.1. FP and VCT……..…… ☐

   3.2. FP and PITC……..…… ☐

   3.3. FP and PMTCT……..…… ☐

   3.4. FP and ART…….. ☐

   3.5. FP and Home based HIV care……..…. ☐

   3.6. Others (Specify)……..…..…… ☐

4. Which approach do you follow for FP and HIV service integration?

   4.1. FP integration in to HIV services…… ☐

   4.2. HIV integration in to FP services……..… ☐

   4.3. Both approaches……... ☐

4.4. I do not know……..… ☐

5. How do you provide the integrated FP and HIV services in your facility?

5.1. Single room, same provider……..…… ☐

5.2. Single room, different provider…….. ☐

5.3. Different room, different provider……..… ☐

5.4. Different provider, different facility……... ☐

5.5. Others (Specify)…….…… ☐

6. Have you received any training related to family planning and HIV service integration in the past 2 years?

6.1. Yes…… ☐ 6.2. No……☐ ***If no go to # 9 for further questions***

7. If yes, what type of training did you attend in the past 2 years
……..
…….

8. If not, what are the reasons?
……..……...
…….

9. Are you aware of the availability of family planning and HIV service integration strategies

9.1. Yes…….. ☐ 9.2. No…… ☐ ***if no, please go to # 11 for further questions***

10. If yes, please name the strategies regarding to Family planning and HIV integration that you are aware of
…….

11. Are you aware of the availability of family planning and HIV service integration guidelines

11.1. Yes…….. ☐ 11.2. No…… ☐ ***if no, please go to # 13 for further questions***

12. If yes, please name the service guidelines regarding to Family planning and HIV integration that you are aware of
……..

13. Do you have behavioral change communication material available for health education regarding the integrated FP and HIV services

13.1. Yes…… ☐ 13.2. No……☐ ***if no, please go to # 15 for further questions***

14. If yes, which types of behavioral change communication materials are available to educate people regarding integrated FP and HIV services?

14.1. Leaflets……... ☐

14.2. Broachers…….…….. ☐

14.3. Posters…… ☐

14.4. Others (Specify)……..... ☐

15. Do you think that FP and HIV services must be integrated at health centre level

15.1. Yes….. ☐ 15.2. No……☐ ***if no, please go to number 17 for further questions***

16. If your answer is yes, please tick the advantages of family planning and HIV service integration at the health centre level?

16.1. Avoid missed opportunities……..... ☐

16.2. Increase access for FP and HIV…… ☐
16.3. Promotes dual protection…… ☐
16.4. Reduces cost…….... ☐
16.5. Reduce stigma and discrimination…… ☐
16.6. More efficient use of staff time…… ☐
16.7. Improved teamwork……..... ☐
16.8. Others (Specify)……..…….. ☐

17. Please identify the encouraging factors to integrate FP and HIV services?

17.1. Government's commitment……. ☐
17.2. Good infrastructure…….…..... ☐
17.3. Good donor support ……...…. ☐
17.4. Adequate staff number……. ☐
17.5. Good willing of clients……..... ☐
17.6. Others (Specify)……..…..… ☐

18. Do you think that any of the following can be the disadvantages of integrating FP and HIV services at the health centre level?

18.1. There is no any disadvantage…… ☐
18.2. It reduces the quality of care…… ☐
18.3. Increased waiting time of clients……..… ☐
18.4. It affects other activities of the health centre. ☐
18.5. Others (Specify)…….…… ☐

19. What do you experience as challenges for the integration of FP and HIV services?

19.1. Minimal support from management……..……..… ☐
19.2. Inadequate infrastructure…..……,.... ☐
19.3. Shortage of Family planning and HIV supplies and commodities…. ☐
19.4. Shortage of human resources……..... ☐
19.5. High health worker patient ratio…….….. ☐
19.6. Poor counseling service……..……. ☐
19.7. Minimal supportive supervision by the sub city health office……..… ☐
19.8. Minimal monitoring ……..……..…. ☐
19.9. Poor evaluation……..……. ☐
19.10. Inadequate budget allocation by the health centre……..……..… ☐
19.11. Others (Specify)…….……..… ☐

20. Please explain the reasons why you think the aspects that you have ticked above are challenging

…….

21. What do you suggest to improve the family planning and HIV service integration at the health centre level

Thank you for your time and the valuable contribution to this study!

ANNEXURE 3: Information sheet and Consent form for clients

Information sheet and Consent form

Consent to participate in a Research (clients)

Title: Strategies to facilitate the integration of family planning and HIV services at the health centre level in Addis Ababa, Ethiopia.

Researcher: Dessie Ayalew Mekonnen.

Supervisor: Professor Lizeth Roets

Dear _____,

You are invited voluntarily to participate in a research study. You have been chosen to take part in this study because you are one of the clients, randomly selected to assist as a participant in this research. Although the study will not benefit you directly, it will provide information that might enable to improve the integration of family planning and HIV services at the health centre level. The purpose of this study is to develop strategies to facilitate the implementation of integrated family planning and HIV services that will be used by the service providers and program managers at the health center level in Addis Ababa, Ethiopia.

The study and its procedures have been approved by the Research Ethics Committee, Higher Degree Committee of the Department of Health Studies at the University of South Africa (UNISA) as well as the Addis Ababa city administration health bureau. We can foresee no risks if you decide to participate in this study.

If you are volunteer to participate, please complete the Questionnaire provide as honest as and best as you can. The completion of the questionnaire will take about 20 minutes. There will be no cost, except your time to complete the questionnaire. Please feel free to ask any questions you may have about the study or about your rights as a research respondent. If other questions occur to you later, you may contact the researcher, Mr. Dessie Ayalew at +251911746975 or the Research ethics Committee, Higher Degree Committee of the Department of Health Studies at the University of South Africa (UNISA) at +27 12 429 2226.

It is important for you to know that your participation is entirely voluntary. You may decide not to take part in or quit the study at any time, without any penalty. All information will be kept confidential. The study data will be coded and will not be linked to your name. Your identity will not be revealed while the study is being conducted or when the study is reported or published.

The research records will be confidential. They will be collected by data collectors and stored in a secure place, and not shared with any other person without your permission.

I have read or listen and understand this consent form and voluntarily consent to participate in this study.

Subject's signature_____ Date_____

I have explained this study to the above respondent and have sought his/her understanding for informed consent.

Interviewer's signature_____ Date_____

ANNEXURE 4: Information sheet and Consent form for service providers

Information sheet and Consent form

Consent to participate in a Research (Service providers)

Title: Strategies to facilitate the integration of family planning and HIV services at the health centre level in Addis Ababa, Ethiopia.

Researcher: Dessie Ayalew Mekonnen

Supervisor: Professor Lizeth Roets

Dear _____,

You are invited voluntarily to participate in a research study. You have been chosen to take part in this study because you are one of the service providers, randomly selected to assist as a participant in this research. Although the study will not benefit you directly, it will provide information that might enable to improve the integration of family planning and HIV services at the health centre level. The purpose of this study is to develop strategies to facilitate the implementation of integrated family planning and HIV services that will be used by the service providers and program managers at the health center level in Addis Ababa, Ethiopia.

The study and its procedures have been approved by the Research Ethics Committee, Higher Degree Committee of the Department of Health Studies at the University of South Africa (UNISA) as well as the Addis Ababa city administration health bureau. We can foresee no risks if you decide to participate in this study.

If you are volunteer to participate, please complete the questionnaire provide as honest as and best as you can. The completion of the questionnaire will take about 20 minutes. There will be no cost, except your time to complete the questionnaire. Please feel free to ask any questions you may have about the study or about your rights as a research respondent. If other questions occur to you later, you may contact the researcher, Mr. Dessie Ayalew at +251 911 7469 75 or the research ethics committee Higher Degree Committee of the Department of Health Studies at the University of South Africa (UNISA) at +27 12 429 2226.

It is important for you to know that your participation is entirely voluntary. You may decide not to take part in or quit the study at any time, without any penalty. All information will be kept confidential. The study data will be coded and will not be linked to your name. Your identity will not be revealed while the study is being conducted or when the study is reported or published.

The research records will be confidential. They will be collected by data collectors and stored in a secure place and not shared with any other person without your permission.
I have read this consent form and voluntarily consent to participate in this study.

Subject's signature_____ Date_____

ANNEXURE 5: Information sheet and Consent form for Nominal group

Information sheet and consent

Consent to participate in a Research (Nominal group)

Title of the research: Strategies to facilitate the integration of family planning and HIV services at the public center level in Addis Ababa, Ethiopia
Researcher: Dessie Ayalew Mekonnen (PhD Candidate)
Supervisor: Professor Lizeth Roets
Dear _____,

You are invited voluntarily to participate in the nominal group on the 26th /28th October 2016 at Addis Ababa health bureau meeting hall, Addis Ababa.

You have been chosen to take part in this nominal group because you are one of the Family planning/ HIV program officers/coordinators or focal points in Addis Ababa You are purposely selected to participate in nominal group in this research due to your expertize. Although the nominal group will not benefit you directly, you will form part of the process to identify strategies that might enable to facilitate the integration of family planning and HIV services at the public health centre level in Addis Ababa. The purpose of this nominal group is to develop strategies to facilitate the implementation of integrated family planning and HIV services that will be used by the service providers as well as the program managers at the health center level in Addis Ababa, Ethiopia.

The study and its procedures have been approved by the Research Ethics Committee, of the Department of Health Studies at the University of South Africa (UNISA) as well as the Addis Ababa city administration health bureau. We can foresee no risks if you decide to participate in this nominal group.

If you volunteer to participate, Please provide your written consent to the reproductive health process owner at Addis Ababa health bureau, who is the gatekeeper for this nominal group. Please feel free to ask any questions you may have about the nominal group or the study or about your rights as a nominal group participant. The nominal group will be conducted on…….. at ……The nominal group will take 2 hours and 30 minutes and there will be no cost, except your time to attend the nominal group. All the information obtained will be kept confidential. You name or position will not be revealed in the research report as the data will be presented in an unidentifiable manner. No remuneration will be offered and the research results

will be published after completion of the study. If you choose not to participate, you may withdraw without any negative consequences.

It is important for you to know that your participation is entirely voluntary. You may decide not to take part in or quit the nominal group at any time, without any penalty. All information will be kept confidential. The nominal group data will be coded and will not be linked to your name. Your identity will not be revealed while the study is being conducted or when the study is reported or published. The nominal group records will be kept confidential.

If other questions occur to you later, you may contact the researcher, Mr. Dessie Ayalew at +251 911 7469 75 or the research ethics committee of the Department of Health Studies at the University of South Africa (UNISA) at +27 12 429 2226 or the reproductive health department, Addis Ababa health bureau at +251-0115538194.

I have read this consent form and voluntarily consent to participate in this nominal group.

Subject's signature_____ Date_____

ANNEXURE 6: Ethical clearance certificate from University of South Africa (UNISA)

UNISA university of south africa

UNIVERSITY OF SOUTH AFRICA
Health Studies Higher Degrees Committee
College of Human Sciences
ETHICAL CLEARANCE CERTIFICATE

HSHDC/223/2013

Date: 17 October 2013 Student No: 5348-430-4

Project Title: Strategies facilitate the integration of family planning and HIV services at Health Center level in Ethiopia.

Researcher: Mekonnen Dessie Ayalew

Degree: D Litt et Phil Code: DPCHS04

Supervisor: Prof L Roets
Qualification: PhD
Joint Supervisor: -

DECISION OF COMMITTEE

Approved [√] **Conditionally Approved** [ ]

Prof L Roets
CHAIRPERSON: HEALTH STUDIES HIGHER DEGREES COMMITTEE

pp

Prof MM Moleki
ACADEMIC CHAIRPERSON: DEPARTMENT OF HEALTH STUDIES

For

PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRES

UNIVERSITEIT VAN SUID-AFRIKA
PRETORIA
UNIVERSITY OF SOUTH AFRICA

ANNEXURE 7: Approved research support letter 1 written from Addis Ababa City Administration Health Bureau (AACAHB) to conduct phase 1 of the study

The Addis Ababa City Administration Health Bureau

Ref. AAHB/2638/227

Date Jan 10, 2014

To Semen Health Center
To Meshualekia Health Center
To Kotebe Health Center
To Wreda 9 Health Center N/S/Lafto
To Woreda 3 Health Center N/S/Lafto
To Kirkos Health Center
To Afincho ber Health Center
To Amoraw Health Center
To Hidase Health Center
To Selam Health Center
To Shegole Health Center
To Bole 17 Health Center

To Addisugebeyia Health Center
To Kasanchis Health Center
To Gotera Health Center
To Yeka Health Center
To Entoto # 1 Health Center Yeka
To A/Hiwot Health Center Yeka
To A/ketema Health Center Yeka
To Woreda 5 Health Center N/S/Lafto
To Woreda 4 Health Center N/S/Lafto
To Woreda 1 Health Center Yeka
To Meri Health Center
To Summit Health Center
To Arada, Dilfire, Felege meles, Kolfie, Mayichew, Ras Emiru and shiromeda Health centers

Addis Ababa

Subject: Request to access Health Facilities to conduct approved research

This letter is to support Dessie Ayalew to conduct research, which is entitled as "Strategies to facilitate the integration of family planning and HIV services at health center level in Addis Ababa."

The study proposal was duly reviewed and approved by UNISA University Review Board and subsequently reviewed and approved by Addis Ababa Health Bureau IRB, the principal investigator is informed with a copy of this letter to report any changes in the study procedures and submit an activity progress report to the Ethical Committee as required.

Therefore we request the & Health Center staffs to provide support to the principal investigator.

With Regards

Frie Hailu

Secretary Ethical Clearance committee

Cc: Dessie Ayalew
Addis Ababa
Ethical Clearance Committee
Addis Ababa

ANNEXURE 8: Approved research support letter 2 written from Addis Ababa City Administration Health Bureau (AACAHB) to conduct phase 2 of the study

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CITY GOVERNMENT OF ADDIS ABABA
HEALTH BUREAU

ቁጥር/Ref.No አ/ል/H/D/3582/2005
ቀን 10/1/09

To: Gulele sub city health office
Arada sub city health office
Kolfe keraniyo sub city health office
Lideta sub city health office
Addis ketema sub city health office
Addis Ababa

Subject: Invitation to attend Nominal Group Discussion

In collaboration with Addis Ababa city administration health bureau and University of South Africa (UNISA), MR. Dessie Ayalew, PhD candidate at UNISA plans to conducta nominal group discussion to presenthis preliminary researchfindingsand then participants will vote, rank and finally develop strategies to facilitate the integration of family planning and HIV services at the public health center level. The strategies will be utilized by service providers and program managers to facilitate the integration of family planning and HIV services at the public health center level in Addis Ababa.

The nominal group discussion will be held on the 26th October 2016 at Soramba Hotel starting from 9:00a.m.to 12:30p.m.

Therefore; you are kindly requested to nominatethe appropriate participants and invite to attend the nominal group discussion– one family planning and one HIV program officers/focal person from your sub city health office with a total of 2participants. For more information see the attached table.

Kind regards,

Getu Bisa Mekasha
Urban Health Extension &
IEC/BCC Sub-Process Leader

The Addis Ababa City Administration

tl. 251-115-513911 FAX: 251-115-515689 E-mail: aahba@ethionet.e P.O.BOX 30738 Addis Ababa, Ethiopia

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In replying please quote our Ref. No.

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CITY GOVERNMENT OF ADDIS ABABA
HEALTH BUREAU

ቁጥር Ref.No AAHB/13.58/205
ቀን 10/01/09 E.C.

To Bolesub city health office
Nifas silk sub city health office
Akaki kalitysub city health office
Yekasub city health office
Kirkossub city health office
Addis Ababa

Subject: Invitation to attend Nominal Group Discussion

In collaboration with Addis Ababa city administration health bureau and University of South Africa (UNISA), MR. Dessie Ayalew, PhD candidate at UNISA plans to conduct a nominal group discussion to present his preliminary research findings and then participants will vote, rank and finally develop strategies to facilitate the integration of family planning and HIV services at the public health center level. The strategies will be utilized by service providers and program managers to facilitate the integration of family planning and HIV services at the public health center level in Addis Ababa.

The nominal group discussion will be held on the 28th October 2016 at Siyonat Hotel starting from 9:00a.m.to 12:30p.m.

Therefore; you are kindly requested to nominate the appropriate participants and invited to attend the nominal group discussion– one family planning and one HIV program officers/focal person from your sub city health office with a total of 2 participants. For more information see the attached table.

Kind regards,

Getu Bisa Mekasha
Urban Health Extension &
C/BCC Sub-Process Leader

el. 251- 115-513911 FAX: 251-115-515689 E-mail: aahb@ethionet.e P.O.BOX 30738 Addis Ababa, Ethiopia

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In replying please quote our Ref. No.

Table 1: List of participants to attend the nominal group discussion

Date	Organization	FP program officer/ Focal person	HIV program officer/ focal person	Venue
26 October 2016	Gulele sub city health office	1	1	Soramba Hotel near to Arada Giorgis
	Arada sub city health office	1	1	
	Kolfe keraniyo sub city health office	1	1	
	Lideta sub city health office	1	1	
	Addis ketema sub city health office	1	1	
	AAHB	1	0	
	FMOH	0	1	
	Total	**6**	**6**	
28 October 2016	Bole sub city health office	1	1	Siyonat Hotel near to Bole Medihanialem
	Nifas silk lafto sub city health office	1	1	
	Akakki kality sub city health office	1	1	
	Yeka sub city health office	1	1	
	Kirkos sub city health office	1	1	
	AAHB	0	1	
	FMOH	1	0	
	Total	**6**	**6**	

ANNEXURE 9: A guide for nominal group discussion

The instruction for nominal group discussion

Title of the research: Strategies to facilitate the integration of family planning and HIV services at the public center level in Addis Ababa, Ethiopia
Researcher: Dessie Ayalew Mekonnen (PhD Candidate)
Supervisor: Professor Lizeth Roets
Total number of nominal group sessions: 2 sessions (1 session lasts for 2 hours)
Place of the nominal group: Addis Ababa (The meeting hall to be notified soon)
Nominal group participants: 12 Program officers (half family planning and half HIV program officers) will be selected from 10 sub city health department will be attend in the first nominal group facilitation and the same number and composition in the second nominal group discussion.
Tentative date of the nominal group: October 26 and 28, 2016

Instruction: ''Please write down the strategies that can be implemented to facilitate the integration of family planning and HIV services at the public health centre level.''

A guide to the steps of the nominal group discussion

The facilitator should maintain as neutral throughout the process of the nominal group facilitation. The facilitator should ensure that all the steps of nominal group should be followed as described below.

Step 1: Opening the session
This is done by enunciating the purpose of convening the session, especially stating the issue (usually in the form of a question) for which the session has been convened. The 'issue' referred here should be such that several ideas can be easily generated about it.

Note that the issue should be well understood by all the participants and they are expected to be knowledgeable on the issue, as mentioned before. In many cases, the issue is communicated to the participants well before assembling for the NG session. Even if everyone knows the issue, it is good to have it set out again in clear terms. To do this, facilitator may need to give a brief background of the issue. Furthermore, he/she should briefly mention the rules of a NG session, which are to be followed during the session.

Step 2: Silent generation of ideas in writing

All the participants are given about 10 minutes to generate as many ideas as possible pertaining to the issue. At this stage, quantity rather than quality is emphasized. Participants are encouraged to write down whatever ideas come into their mind. Quality of ideas will be taken care of at a later step. This step of idea generation needs to be completed in total silence, i.e., no discussion among group members is permitted.

Step 3: Round-robin recording of ideas

In this step, the facilitator starts from one end of the room and asks each participant to provide the best idea from his or her list which he/she has generated at Step 2. If there are 12 participants, then in one round there will be 12 ideas. All the ideas have to be written down on the marker board, which is in full view of the entire group. After completing the first round, the facilitator should start for the second round and again one idea per person will be collected and in this way, 10 more ideas will be written down on the board. Collecting ideas in this round-robin fashion will be continued until all the ideas are exhausted in the participants' list. At any round, if someone does not have any idea to share, then he/she can pass for that round. But again, it is possible for him/her to re-enter and provide additional ideas. On the marker board, ideas are numbered sequentially.

Step 4: Serial discussion on the ideas

The purpose of this step is to clarify the meaning of all the ideas. The facilitator starts from the beginning of the master list (i.e., the list on the marker board) and asks the participants whether the meaning is clear to them. If any idea is not clear, then it needs to be clarified by the person who provided it or by someone else. Note that there should not be any ambiguity on any idea. All the ideas are to be well understood by all the participants. However; the depth of the discussion should be controlled by the facilitator to ensure that a heated debate does not brew.

Step 5: Voting to select the most important ideas

This is the time to ask each of the participants to identify the most important 5 ideas from the master list and rate them using 1 to 5 scales according to their importance. The most important idea is to be assigned a rating of 5 and the least among these 5 ideas will receive the rating of 1. When all the participants finish the task of rating, cards are to be collected from all of them.

ANNEXURE 10: CV of Statistician

CURRICULUM VITAE

PERSONAL DATA

NAME : Yesunesh Teshome Yimer
DATE OF BIRTH : April 1, 1973
SEX : Female MARITAL STATUS : Married NATIONALITY: Ethiopian
ADDRESS : Arada sub city, Kebeke 17/07, House No. C-202
Tel. 0912-068521, 011- 156-92-35 (home), P. O. Box 80333, AA Email: yesunesh.teshome@yahoo.com OR Yesunesh.teshome@gmail.com

EDUCATION BACKGROUND

Name of school/Institution/	Period attended	Awarded
University of Gondar	2012-2014	Masters degree in public health (MPH)
College of Telecommunications & Information Technology	2005/06 – 2008	MBA in Telecom Management
A.A.U. Science Faculty, Statistics Dep.	1990/91 – 1994	B.Sc. Degree in Statistics
Atse Gelawdiwos TVHS (Nazreth)	1989 – 1990	E.S.L.C.E. passed

WORK EXPERIENCE OVER 10 Years in different positions (GOs and NGO)

1. **Since October 13, 2014**
   As **Monitoring and Evaluation Officer for the Vaccine Program** at Clinton Health Access Initiative.
2. **Jan. 23, 2012 – Aug. 29, 2014**
   As **Monitoring and Evaluation Manager** at Abt Associates Inc. for Private Health Sector Program (PHSP) funded by USAID.
3. **Jan. 1, 2009 – Jan. 9, 2012**
   As **M & E Officer and Public Relations, Planning, Monitoring & Evaluation Department Head** at Organization for Social Services for AIDS (OSSA)
4. **June 1, 2008 - Dec. 31, 2008** As **Assistant Manager** at BizSoft PLC.
5. **February 2006 – January 2008**
   As a **lecturer** of Managerial-statistics, at Unity University College and as **lecturer** of Biostatistics at Assela Nursing College.
6. **April 2004 to June 2005**
   As **Monitoring and Evaluation Desk Officer I** in Ethiopian Orthodox Church-Development and Inter Church Aid Commission /EOC-DICAC/
7. **December 1999 to November 2003**
   As **Statistician III** in National Urban Planning Institute /NUPI/, Addis Ababa.

RESEARCH WORKS

- Magnitude and Predictors of Anti-Retroviral Treatment (ART) Failure in Private Health Facilities in Addis Ababa, Ethiopia. Published in PLoS One. 2015; 10(5): e0126026. Published online 2015 May 6. doi: 10.1371/journal.pone.0126026
- An MBA research project entitled “Customer Relationship Marketing in Ethiopian Telecommunications Corporation in relation to McKinsey’s 7 S model: An Assessment”
- B.Sc. thesis on “Sample survey on Change of Behaviors of Students as they pass from year to Year in Addis Ababa University.”

LANGUAGE PROFICIENCY

- Amharic (Fluent), Oromiffa (Good), and English (Fluent)

REFERENCES

1. Dr Teklay Kidane, SPM, Vaccine program, CHAI Ethiopia
   E-mail:- teklay8desta@yahoo.com, Tel. +251 0911735848, Addis Ababa
2. Dr. Ibrahim Yusuf, Program Manager, OSSA
   E-mail: Ibuyuya@yahoo.com, Tel:- +251 0922488313, Addis Ababa
3. Dr. Mesfin Eshetu, Director, Quality Management Department, PHSP
   E-mail: mesfine@phsp-et.com, Tel : +251 0911765867, Addis Ababa
4. Prof. Alemayehu Worku, ACIPH
   E-mail: alemayehuwy@yahoo.com
   Tel. +251911405652, Addis Ababa, Ethiopia

ANNEXURE 11: Letter from the editor

Cell/Mobile: 073-782-3923

53 Glover Avenue
Doringkloof
0157 Centurion

26 January 2018

TO WHOM IT MAY CONCERN

I hereby certify that I have edited **MEKONNEN DESSIE AYALEW** thesis:

Strategies to facilitate the integration of family planning and HIV services at the public health centre level in Addis Ababa, Ethiopia,

for language and content.

IM Cooper

Iauma M Cooper
192-290-4